10/772,027 EAST

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	470	((514/293) or (548/302.4)).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/12/02 16:28
L2	155	L1 and (triaza or imidazo)	US-PGPUB; USPAT	OR	OFF	2005/12/02 16:28

10/ 772,027

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 09	ACD predicted properties enhanced in REGISTRY/ZREGISTRY
NEWS	4	OCT 03	MATHDI removed from STN
NEWS	5	OCT 04	CA/CAplus-Canadian Intellectual Property Office (CIPO) added to core patent offices
NEWS	6	OCT 13	New CAS Information Use Policies Effective October 17, 2005
NEWS	7	OCT 17	STN(R) AnaVist(TM), Version 1.01, allows the export/download of CAplus documents for use in third-party analysis and visualization tools
NEWS	8	OCT 27	Free KWIC format extended in full-text databases
NEWS	9	OCT 27	DIOGENES content streamlined
NEWS	10	OCT 27	EPFULL enhanced with additional content
NEWS	11	NOV 14	CA/CAplus - Expanded coverage of German academic research
NEWS	12	NOV 30	REGISTRY/ZREGISTRY on STN(R) enhanced with experimental spectral property data

NEWS EXPRESS	DECEMBER 02 CURRENT VERSION FOR WINDOWS IS V8.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 02 DECEMBER 2005. V8.0 USERS CAN OBTAIN THE UPGRADE TO V8.01 AT http://download.cas.org/express/v8.0-Discover/
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 13:52:52 ON 02 DEC 2005

=> file reg
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

10/ 772,027

FULL ESTIMATED COST 0.21 0.21

FILE 'REGISTRY' ENTERED AT 13:53:04 ON 02 DEC 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 30 NOV 2005 HIGHEST RN 869059-01-8
DICTIONARY FILE UPDATES: 30 NOV 2005 HIGHEST RN 869059-01-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

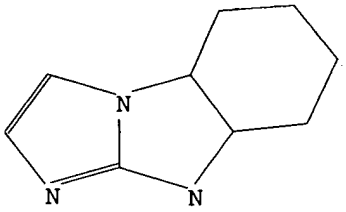
****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

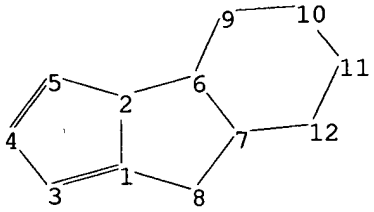
Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10772027.str



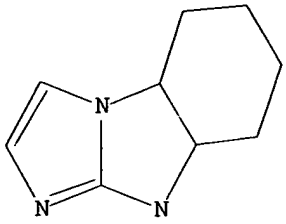


ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12
ring bonds :
1-3 1-2 1-8 2-5 2-6 3-4 4-5 6-7 6-9 7-8 7-12 9-10 10-11 11-12
exact/norm bonds :
1-3 1-2 1-8 2-5 2-6 3-4 4-5 6-7 6-9 7-8 7-12 9-10 10-11 11-12

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sample
SAMPLE SEARCH INITIATED 13:53:22 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 436 TO ITERATE

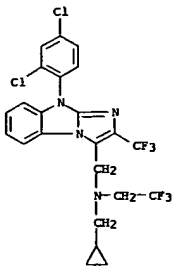
100.0% PROCESSED 436 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 7468 TO 9972
PROJECTED ANSWERS: 1469 TO 2691

L2 50 SEA SSS SAM L1

=> d scan l2

L2 50 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN
IN 9H-Imidazo[1,2-a]benzimidazole-3-methanamine, N-(cyclopropylmethyl)-9-(2,4-dichlorophenyl)-N-(2,2,2-trifluoroethyl)-2-(trifluoromethyl)- (9CI)
MF C23 H18 Cl2 F6 N4



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

10/ 772,027

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=> s l1 full
FULL SEARCH INITIATED 13:53:42 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     7797 TO ITERATE

100.0% PROCESSED     7797 ITERATIONS                          1612 ANSWERS
SEARCH TIME: 00.00.01

L3         1612 SEA SSS FUL L1

=> file hcaplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                             161.33     161.54

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FILE LAST UPDATED: 1 Dec 2005  (20051201/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 13:52:52 ON 02 DEC 2005)

     FILE 'REGISTRY' ENTERED AT 13:53:04 ON 02 DEC 2005
L1             STRUCTURE UPLOADED
L2           50 S L1 SAMPLE
L3         1612 S L1 FULL

     FILE 'HCAPLUS' ENTERED AT 13:53:48 ON 02 DEC 2005

=> s l3
L4          155 L3

=> d l4 1- ibib abs fhitstr
YOU HAVE REQUESTED DATA FROM 155 ANSWERS - CONTINUE? Y/(N):y
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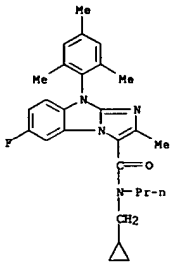
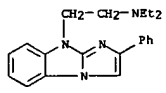
L4 ANSWER 1 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:760346 HCAPLUS
DOCUMENT NUMBER: 143:367245
TITLE: Synthesis and structure-activity relationship of imidazo[1,2-a]benzimidazoles as corticotropin-releasing factor 1 receptor antagonists
AUTHOR(S): Han, Xiaojun; Pin, Sokhom S.; Burris, Kevin; Fung, Lawrence K.; Huang, Stella; Taber, Matthew T.; Zhang, Jie; Dubowchik, Gene M.
CORPORATE SOURCE: Pharmaceutical Research Institute, Bristol-Myers Squibb Company, Wallingford, CT, 06492, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2005), 15(18), 4029-4032
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 8-Aryl-1,3a,8-triazacyclopent[a]indene derivs. represent a novel series of high binding affinity corticotropin-releasing factor 1 receptor antagonists. Here, their their synthesis, structure-activity relationship, and pharmacokinetic properties of one compound, N-(cyclopropylmethyl)-N-propyl-2-(trifluoromethyl)-9-(2,4,6-trimethylphenyl)-9H-imidazo[1,2-a]benzimidazole-3-methanamine (Ki = 23 nM) were reported.
IT **444323-33-5P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of imidazo[1,2-a]benzimidazole carboxamide derivs. and study of their activity as corticotropin-releasing factor 1 receptor antagonists and study of their structure-activity relationship)
RN 444323-33-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxamide, N-(cyclopropylmethyl)-6-fluoro-2-methyl-N-propyl-9-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 1 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:402022 HCAPLUS
DOCUMENT NUMBER: 143:222057
TITLE: Some aspects of immunomodulatory effects of new benzimidazole derivatives
AUTHOR(S): Samotrueva, M. A.; Khivrina, S. A.; Matveev, A. B.
CORPORATE SOURCE: A. V. Lunacharskii State Medical Academy, Astrakhan, Russia
SOURCE: Bulletin of Experimental Biology and Medicine (2005), 139(1), 75-76
CODEN: BEXBAN; ISSN: 0007-4888
PUBLISHER: Springer Science+Business Media, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Immunomodulatory activity of new condensed benzimidazole derivs. was studied in CBA mice. Some of these derivs. injected in a dose of 50 mg/kg on the day of immunization stimulated humoral and cellular elements of the primary immune response to sheep erythrocytes in mice.
IT **23572-32-9**, RU-13
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(condensed benzimidazole derivative RU-355, RU-284 and RU-254 stimulated spleen weight, nuclear and antibody producing cell count, delayed type hypersensitivity and is promising as base for new highly effective immunomodulator in mouse)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

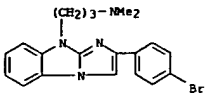
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:369133 HCAPLUS
DOCUMENT NUMBER: 142:435774
TITLE: Compositions treatment of chronic inflammatory diseases
INVENTOR(S): Shapiro, Howard K.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 44 pp., Cont.-in-part of U.S. Ser. No. 610,073, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005090553	A1	20050428	US 2004-924945	20040824
PRIORITY APPLN. INFO.:			US 1992-906909	B2 19920630
			US 1994-241603	B2 19940511
			US 1997-814291	B2 19970310
			US 2000-610073	B2 20000705

OTHER SOURCE(S): MARPAT 142:435774
AB This invention defines novel compns. that can be used for clin. treatment of a class of chronic inflammatory diseases. Increased generation of carbonyl substances, aldehydes and ketones, occurs at sites of chronic inflammation and is common to the etiologies of all of the clin. disorders addressed herein. Such carbonyl substances are cytotoxic and addnl. serve to perpetuate and disseminate the inflammatory process. This invention defines use of compns., the orally administered required primary agents of which are primary amine derivs. of benzoic acid capable of reacting with the carbonyl substances. P-Aminobenzoic acid (or PABA) is an example of the required primary agent of the present invention. PABA has a small mol. weight, is water soluble, has a primary amine group which reacts with carbonyl-containing substances and is tolerated by the body in relatively high dosages for extended periods. The method of the present invention includes administration of a composition comprising: (1) an orally consumed primary agent; (2) a previously known medicament co-agent recognized as effective to treat a chronic inflammatory disease addressed herein administered to the mammalian subject via the oral route, other systemic routes of administration or via the topical route; and (3) optionally 1 or more addnl. orally consumed co-agent selected from the group consisting of antioxidants, vitamins, metabolites at risk of depletion, sulfhydryl co-agents, co-agents which may facilitate glutathione activity and nonabsorbable primary amine polymeric co-agents, so as to produce an additive or synergistic physiol. effect of an anti-inflammatory nature.
IT **36994-25-9**, 2-(p-Bromophenyl)-9-dimethylaminopropyl-9H-imidazo[1,2-a]benzimidazole
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. treatment of chronic inflammatory diseases)
RN 36994-25-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-propanamine, 2-(4-bromophenyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



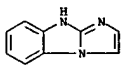
L4 ANSWER 4 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:789347 HCAPLUS
DOCUMENT NUMBER: 142:13572
TITLE: On photoinduced double-proton transfer reactions: the photophysics of the 9H-imidazo[1,2-a]benzimidazole dimer
AUTHOR(S): Catalan, J.; De Paz, J. L. G.; Del Valle, J. C.; Claramunt, R. M.; Mas, Th.
CORPORATE SOURCE: Departamento de Quimica Fisica Aplicada, Universidad Autonoma de Madrid, Madrid, E-28049, Spain
SOURCE: Chemical Physics (2004), 305(1-3), 175-185
CODEN: CMPHC2; ISSN: 0301-0104
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The proton transfer in the C2h doubly H-bonded 9H-imidazo[1,2-a]benzimidazole (9HIB) dimer has been investigated. From the theor. point of view, with the aid of d. functional theory (DFT) and Moller-Plesset second-order perturbation theory: (i) the dimer formation presents at 298 K a large free energy for dimerization of ΔG0 = -8.92 kcal/mol; (ii) the double-proton transfer (DPT) tautomer of the 9HIB dimer in the ground electronic state (S0) is only slightly less stable (ΔG0 = 2.45 kcal/mol) than the normal tautomer dimer; and (iii) the DPT potential energy curve in S0 exhibits double min., and a large activation energy barrier of 8.2 kcal/mol for the reverse DPT process. However, the 9HIB dimer does not undergo an excited state DPT reaction, calculated at the time-dependent DFT level and exptl. checked with fluorescence spectroscopy, owing to the unusual decrease of basicity (-16.7 kcal/mol) of the N-imidazole group upon photoexcitation. The UV-Vis spectroscopic exptl. evidence (from 298 to 213 K) confirms the ease to generate the 9HIB dimer, and the card-pack aggregates of 1-methylimidazo[1,2-a]benzimidazole in 2-methylbutane and decalin. Electronic supplementary information (ESI) is available at doi:10.1016/j.chemphys.2004.06.048.

IT 247-79-0, 1H-Imidazo[1,2-a]benzimidazole
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(9HIB; photophysics of imidazobenzimidazole monomer and its doubly H-bonded dimer and photoinduced double-proton transfer reactions)

RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



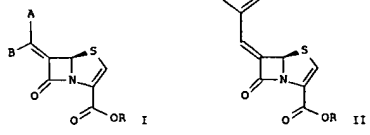
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:550737 HCAPLUS
DOCUMENT NUMBER: 141:106320
TITLE: Process for preparing 6-alkylidene penem derivatives
INVENTOR(S): Abe, Takao; Matsunaga, Hiroshi; Mihira, Ado; Sato, Chisato; Ushirogochi, Hideki; Sato, Koichi; Takasaki, Tsuyoshi; Venkatesan, Aranapakam Mudumbai; Mansour, Tarek Suhayl
PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA
SOURCE: U.S. Pat. Appl. Publ., 103 pp., Cont.-in-part of U.S. Ser. No. 427,666.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004132708	A1	20040708	US 2003-693315		20031024
US 2004053913	A1	20040318	US 2003-427666		20030501
PRIORITY APPLN. INFO.:			US 2002-377048P	P	20020501
			US 2003-427666	A2	20030501

OTHER SOURCE(S): CASREACT 141:106320; MARPAT 141:106320
GI

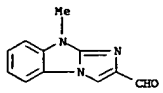


AB The present invention provides a process of making compds. of formula I (R = H, C1-6 alkyl, C5-6 cycloalkyl, or substituted ester; A, B = H, heteroaryl, fused bicycles, fused tricycles, etc.) which are useful for the treatment of bacterial infection or disease. Thus, sodium (5R),(6Z)-6-(2,3-dihydroimidazo[2,1-b]thiazol-6-ylmethylene)penem-3-carboxylate (II) was prepared via a multistep synthetic sequence which started from 6-aminopenicillanic acid.

IT 623931-49-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for the preparation of 6-alkylidene penem derivs.)

RN 623931-49-7 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-2-carboxaldehyde, 9-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

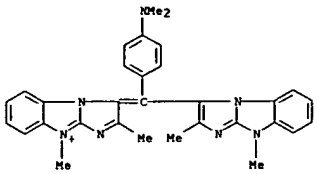


L4 ANSWER 6 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:529211 HCAPLUS
DOCUMENT NUMBER: 141:93966
TITLE: Hair dyeing compositions containing a diheteroylarylmethane direct dye or its leuco precursor
INVENTOR(S): Guerin, Frederic; Lagrange, Alain
PATENT ASSIGNEE(S): L'oreal, Fr.
SOURCE: Fr. Demande, 51 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2849371	A1	20040702	FR 2002-16845	20021230
EP 1437122	A1	20040714	EP 2003-104983	20031226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004210783	A2	20040729	JP 2003-434421	20031226
US 2004187229	A1	20040930	US 2003-746501	20031229
PRIORITY APPLN. INFO.:			FR 2002-16845 A	20021230
			US 2003-450358P P	20030228

OTHER SOURCE(S): MARPAT 141:93966
AB A hair dyeing composition comprises a compound chosen from the direct dyes of the diheteroylarylmethane type and its leuco precursors. Thus, a formulation contained (4-[bis-(2-methyl-1H-indol-3-yl)methylene]cyclohexa-2,5-dienylidene)dimethylammonium chloride 0.427, benzyl alc. 4.0, PEG 6.0, hydroxyethyl cellulose 0.7, alkyl polyglucoside 4.5, phosphate buffer 7, and water qs to 100 g.
IT **59526-51-1**
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dyeing compns. containing diheteroylarylmethane direct dye or its leuco precursor)
RN 59526-51-1 HCAPLUS
CN 3H-Imidazo[1,2-a]benzimidazolium, 3-[[4-(dimethylamino)phenyl](2,9-dimethyl-9H-imidazo[1,2-a]benzimidazol-3-yl)methylene]-2,9-dimethyl-, bromide (9CI) (CA INDEX NAME)

L4 ANSWER 6 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



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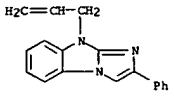
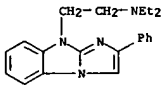
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:300908 HCAPLUS
DOCUMENT NUMBER: 141:410
TITLE: Structure-Function Relationships of Multidrug Resistance P-Glycoprotein
AUTHOR(S): Pajeva, Ilza K.; Globisch, Christoph; Wiese, Michael
CORPORATE SOURCE: Centre of Biomedical Engineering, Bulgarian Academy of Sciences, Sofia, 1113, Bulg.
SOURCE: Journal of Medicinal Chemistry (2004), 47(10), 2523-2533
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The direct structure-function relationships of P-glycoprotein (P-gp) are presently unknown. In this paper two P-gp models are described: a homol. model based on the Escherichia coli MsbA lipid transporter and a model based on the crosslinking results of Loo and Clarke. The pharmacophore pattern for the H-site (Hoechst 33342) is derived and binding sites on the transmembrane domains TM5 and TM11 are identified. Binding sites of rhodamines are also proposed on TM6 and TM12 in accordance with the published data. Location of the binding sites is opposite in both models, suggesting that TMs undergo rotation exposing the substrate bound from the membrane to the pore. It has been concluded that the models derived represent two different functional states of P-gp corresponding to nucleotide-free and nucleotide-bound P-gp. A qual. correspondence to the P-gp crystallog. structure at 20 Å resolution is found. A hypothesis is proposed about rearrangement of TMs upon state transition.
IT **342385-23-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(structure-function relationships of multidrug resistance P-glycoprotein)
RN 342385-23-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-(2-propenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:96153 HCAPLUS
DOCUMENT NUMBER: 141:34907
TITLE: Inhibition of mutagenic activity of 2-aminoanthracene by benzimidazole derivative
AUTHOR(S): Zinov'eva, V. N.; Ostrovskii, O. V.; Anisimova, V. A.; Spasov, A. A.
CORPORATE SOURCE: NII Farm., Kafedra Farm. Farmakol., Volgograd. Med. Akad., Volgograd, Russia
SOURCE: Gigiena i Sanitariya (2003), (5), 61-63
CODEN: GISAAA; ISSN: 0016-9900
PUBLISHER: Izdatel'stvo Meditsina
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The antimutagenic activity of a new benzimidazole derivative RU 185 that has antioxidant properties was observed in the Ames test. This compound reduced the level histidine revertants induced by the promutagen and carcinogen 2-aminoanthracene. Inhibition of the mutagenicity of 2-aminoanthracene appears to be associated with the inactivation of its genotoxic metabolites. The antimutagenic effect of the benzimidazole derivative is possibly due to dihydroxyphenyl group that is present in its structure.
IT **23572-32-9**, RU 13
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of mutagenic activity of aminoanthracene by benzimidazole derivative)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

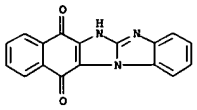
L4 ANSWER 9 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:993992 HCAPLUS
DOCUMENT NUMBER: 141:243473
TITLE: Synthesis and biological activity of 1,4-naphthoquinone derivatives, Part II
AUTHOR(S): Zoorob, H. H.; Berghot, M. A.; Abou-Elzahab, M. M.; Amer, F. A.
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Mansoura University, Mansoura, Egypt
SOURCE: Mansoura Science Bulletin, A: Chemistry (2002), 29(2), 129-142
CODEN: MSBCF4; ISSN: 1110-4562
PUBLISHER: Mansoura University
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:243473

AB The reaction of 1,4-naphthoquinone derivative with aminoheterocyclic compds. as 2,3-diamino-pyridine, 2-amino-3-carboxy-1,4-pyrazine, 5,6-diaminopycidine, 5,6-diamino-2,4-dihydroxy-pyrimidine, 2-aminobenzimidazole and 2-amino-5-mercaptothia-3,4-diazolidene gave the corresponding products. These compds. were cyclized in acetic acid to give the corresponding cyclized derivs. In addition, reaction of 1,4-naphthoquinone derivative with active methylene compds. as dimedone, acetophenone derivs., dibenzoylmethane, and 1,3-diphenylacetone gave the corresponding products. Moreover, treatment of p-toluidine and o-phenylene diamine with gave benzocarbazoles and benzoindolophenazine. While the same treatments with gave benzoindole and benzopyrrolophenazine derivative In addition, one of the products was reacted with primary aromatic amines to give benzoindole. Also, another product was treated with o-phenylene diamine to afford a phenazine derivative The synthesized compds. were tested against bacteria and/or fungi to evaluate their activities with respect to reference known drug.

IT 81411-86-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and antibacterial and antifungal activities of naphthoquinone derivs.)

RN 81411-86-1 HCAPLUS
CN 5H-Naphth[2',3':4,5]imidazo[1,2-a]benzimidazole-7,12-dione (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

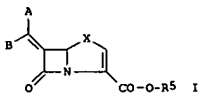
L4 ANSWER 10 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:892786 HCAPLUS
DOCUMENT NUMBER: 139:381302
TITLE: Preparation of heterotricyclic 6-alkylidene-penems as β-lactamase inhibitors for use against bacterial infections or diseases
INVENTOR(S): Venkatesan, Aranapakam Mudumbai; Mansour, Tarek Suhayl; Abe, Takao; Mihira, Ado; Agarwal, Atul; Ushirogochi, Hideki; Gu, Yansong; Tamai, Satoshi; Sum, Fuk-Wah
PATENT ASSIGNEE(S): Wyeth, John, and Brother Ltd., USA
SOURCE: PCT Int. Appl., 187 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

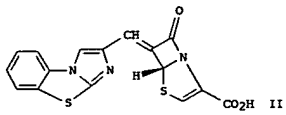
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003093280	A1	20031113	WO 2003-US13451		20030430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2483562	AA	20031113	CA 2003-2483562		20030430
EP 1499622	A1	20050126	EP 2003-733911		20030430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003009878	A	20050419	BR 2003-9878		20030430
JP 2005533018	T2	20051104	JP 2004-501419		20030430
US 2004043978	A1	20040304	US 2003-427427		20030501
NO 2004004550	A	20050128	NO 2004-4550		20041022
PRIORITY APPLN. INFO.:			US 2002-377051P	P	20020501
			WO 2003-US13451	W	20030430

OTHER SOURCE(S): MARPAT 139:381302
GI

L4 ANSWER 10 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



I

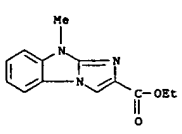


II

AB The present invention provides heterotricyclic 6-alkylidene-penems (shown as I; variables defined below; e.g. II), pharmaceutical compns. and the use thereof for the treatment of bacterial infection or disease in a patient in need thereof. IC50 values for inhibition of β-lactamase from 4 sources are tabulated for >30 examples of I; in vitro minimal inhibitory concns. against 9 types of bacteria are tabulated for >30 examples of I; ED50 values for protective effects of 12 examples of I (sometimes combined with piperacillin) in mice are tabulated. For I: one of A and B is H and the other is an (un)substituted fused tricyclic heteroaryl group; X is O or S; R5 is H, C1-C6 alkyl, C5-C6 cycloalkyl, or CHR3OCOC1-C6alkyl; and R3 is H, C1-C6 alkyl, C5-C6 cycloalkyl, (un)substituted aryl, or (un)substituted heteroaryl. The compds. I when combined with β-lactam antibiotics will provide an effective treatment against life threatening bacterial infections. Thirty-three example prepns. of I are included. For example, II was prepared in 5 steps (81, 93, 40, 67, and 35 %, resp., yields) starting from Et bromopyruvate and 2-aminobenzothiazole and involving intermediates Et imidazo[2,1-b]benzothiazole-2-carboxylate, imidazo[2,1-b]benzothiazole-2-methanol, 2-formylimidazo[2,1-b]benzothiazole, 4-nitrobenzyl 6-[(acetyloxy)(imidazo[2,1-b][1,3]benzothiazol-2-yl)methyl]-6-bromo-7-oxo-4-thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylate.

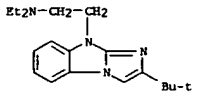
IT 623931-50-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of heterotricyclic 6-alkylidene-penems as β-lactamase inhibitors for use against bacterial infections or diseases)

RN 623931-50-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-2-carboxylic acid, 9-methyl-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 10 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:870193 HCAPLUS
DOCUMENT NUMBER: 140:187536
TITLE: Qualitative and Quantitative Determination of the New Antiarrhythmic Drug Ritmidazole
AUTHOR(S): Stepanov, A. V.; Smirnova, L. A.; Spasov, A. A.
CORPORATE SOURCE: Volgograd State Medical Academy, Volgograd, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2003), 37(8), 440-443
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Kluwer Academic/Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This study is aimed at developing methods for the qual. and quant. determination of ritmidazole by UV and fluorescence spectroscopies and HPLC.
IT **424798-61-8**, Ritmidazole
RL: ANT (Analyte); ANST (Analytical study)
(determination of antiarrhythmic drug ritmidazole by HPLC and spectroscopy)
RN 424798-61-8 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(1,1-dimethylethyl)-N,N-diethyl- (9CI) (CA INDEX NAME)

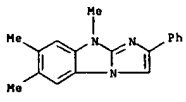


REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:807787 HCAPLUS
DOCUMENT NUMBER: 141:23350
TITLE: Product class 1: pyrylium salts
AUTHOR(S): Balaban, T. S.; Balaban, A. T.
CORPORATE SOURCE: Germany
SOURCE: Science of Synthesis (2003), 14, 11-200
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
GI

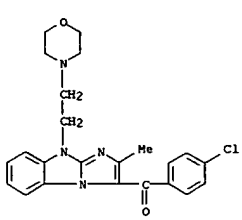
I

AB A review. Methods of preparing pyrylium (I) salts are reviewed including ring closure, aromatization and substituent modification reactions. An explosion is reported below the melting temperature of a substituted 4-(phenylethynyl)pyrylium perchlorate.
IT **157498-77-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of pyrylium salts via ring closure, aromatization and/or substituent modification reactions)
RN 157498-77-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 6,7,9-trimethyl-2-phenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 430 THERE ARE 430 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

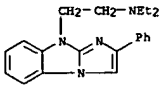
L4 ANSWER 13 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:308779 HCAPLUS
DOCUMENT NUMBER: 140:52729
TITLE: Synthesis and pharmacological activity of 3-aroyl- and 3-hetaroylimidazo[1,2-a]benzimidazoles
AUTHOR(S): Anisimova, V. A.; Spasov, A. A.; Ostrovskii, O. V.; Dudchenko, G. P.; Kosolapov, V. A.; Kucheryavenko, A. F.; Larionov, N. P.; Kovalev, S. G.
CORPORATE SOURCE: Research Institute of Physical and Organic Chemistry, Rostov State University, Rostov-on-Don, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2002), 36(12), 637-642
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Kluwer Academic/Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:52729
AB The synthesis of a series of 3-aroyl- and 3-hetaroylimidazo[1,2-a]benzimidazoles is described. The synthesized compds. were characterized with respect to their pharmacol. properties, including antioxidant, antiaggregant, anticalmodulin, and spasmolytic activities.
IT **154054-70-3P**
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(synthesis and pharmacol. activity of 3-aroyl- and 3-hetaroylimidazo[1,2-a]benzimidazoles)
RN 154054-70-3 HCAPLUS
CN Methanone, (4-chlorophenyl)[2-methyl-9-[2-(4-morpholinyl)ethyl]-9H-imidazo[1,2-a]benzimidazol-3-yl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:121652 HCAPLUS
DOCUMENT NUMBER: 139:214389
TITLE: Synthesis and Pharmacological Activity of 2-(Hetaryl)imidazo[1,2-a]benzimidazoles
AUTHOR(S): Anisimova, V. A.; Spasov, A. A.; Kucheryavenko, A. F.; Panchenko, T. I.; Ostrovskii, O. V.; Kosolapov, V. A.; Larionov, N. P.
CORPORATE SOURCE: Research Institute of Physical and Organic Chemistry, Rostov State University, Rostov-on-Don, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2002), 36(10), 528-534
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Kluwer Academic/Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:214389
AB A series of 2-(hetaryl)imidazo[1,2-a]benzimidazoles was synthesized via condensation of 1-R-2-aminobenzimidazoles with hetarylbromomethyl ketones followed by cyclization of the resulting 2-amino-3-hetaroylmethylbenzimidazolium bromides. The salts of these compds. were also synthesized and their pharmacol. activities, such as excitability of myocardium, antiaggregant and antioxidant activities were evaluated.
IT 23572-32-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of (hetaryl)imidazo[1,2-a]benzimidazoles via condensation of aminobenzimidazoles with hetarylbromomethyl ketones followed by cyclization and their pharmacol. activities)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



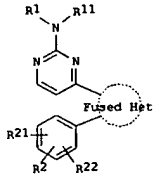
●2 HCl

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:5951 HCAPLUS
DOCUMENT NUMBER: 138:73265
TITLE: Preparation of (pyrimidyl)(phenyl)substituted fused heteroaryl p38 inhibiting and cGMP-dependent protein kinase inhibiting compounds with therapeutic uses
INVENTOR(S): Biftu, Tesfaye; Colletti, Steven L.; Mcintyre, Charles J.; Schmatz, Dennis M.; Feng, Dennis D.; Doherty, James B.; Liang, Gui-Bai; Liverton, Nigel J.; Beresis, Richard; Berger, Richard; Claremon, David A.; Kovacs, Ernest W.; Qian, Xiaoxia
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 280 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

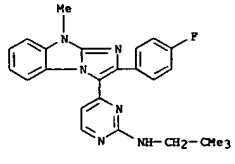
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003000682	A1	20030103	WO 2002-US19507		20020621
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2450555	AA	20030103	CA 2002-2450555		20020621
US 2004176396	A1	20040909	US 2003-477367		20031112
PRIORITY APPLN. INFO.:			US 2001-300748P	P	20010625
			WO 2002-US19507	W	20020621

OTHER SOURCE(S): MARPAT 138:73265
GI



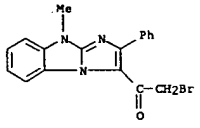
I

L4 ANSWER 15 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
AB (pyrimidyl)(phenyl)substituted fused heteroaryl compds. (shown as I; variables define below; e.g. (2-(4-fluorophenyl)-3-(2-[({(S)-1-phenylethyl)amino]pyrimidin-4-yl)imidazo[1,2-a]pyridin-7-yl)methanol) and pharmaceutically acceptable salts thereof are useful in the treatment of cytokine mediated diseases such as arthritis and in the treatment and/or prevention of protozoal diseases such as coccidiosis. I suppress TNF-α in monocytes and also IL-1β, IL-6 and PGE2 production with IC50 <5 μM. The 'Fused Het' in I may be optionally substituted radicals derived from imidazo[1,2-a]pyridine, imidazo[1,2-a]pyrimidine, imidazo[2,1-b]thiazole, benzimidazole, etc. R1 is H, -C1-6alkyl, -C(O)(C1-6alkyl), -C(O)-C1-6-alkylaryl, -C0-4alkylaryl, -C0-4alkylindanyl, -C0-4alkylimidazolyl, -C0-4alkylthiazolyl, -C0-4alkylpyrazolyl, -C0-4alkyloxadiazolyl, -C0-4-alkyl-C3-6-cycloalkyl, -C0-4alkyl-C1-4-alkoxy, -C1-4-alkyl-N(C0-4-alkyl)(-C0-4-alkyl), -C1-4-alkyl-N(-C0-4alkyl)-CO-C1-4-alkoxy, -C1-4-alkylpiperidinyl, -C0-4alkyltriazolyl, -C1-4-alkylimidazothiazolyl, -C1-4-alkylbenzimidazolyl, -C1-4-alkylbenzothiazolyl, -C1-4-alkylbenzotetrahydrofuranyl, -C1-4-alkylbenzodioxolyl, -C1-4-alkyl-(heterocycloC4O2alkyl), -C1-4-alkyl-(heterocycloC5O1alkyl), -C1-4-alkyltetrahydrofuran, or -C1-4-alkyloxetanyl; R11 is H or -C1-6-alkyl; or R1 and R11, together with the N to which they are attached, form a morpholinyl; R2, R21, R22 each independently is H, halogen, or -C1-4alkyl;. Although the methods of preparation are not claimed, many example prepns. are included.
IT 480454-24-8P, 2-(4-Fluorophenyl)-9-methyl-3-[2-(neopentylamino)pyrimidin-4-yl]-9H-imidazo[1,2-a]benzimidazole
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of (pyrimidyl)(phenyl)substituted fused heteroaryl p38 inhibiting and cGMP-dependent protein kinase inhibiting compds. with therapeutic uses)
RN 480454-24-8 HCAPLUS
CN 2-Pyrimidinamine, N-(2,2-dimethylpropyl)-4-[2-(4-fluorophenyl)-9-methyl-9H-imidazo[1,2-a]benzimidazol-3-yl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:857254 HCAPLUS
DOCUMENT NUMBER: 139:159855
TITLE: Synthesis and pharmacological activity of aminoketones and aminoalcohols of the imidazo[1,2-a]benzimidazole series
AUTHOR(S): Anisimova, V. A.; Avdyunina, N. I.; Spasov, A. A.; Barchan, I. A.
CORPORATE SOURCE: Research Institute of Physical and Organic Chemistry, Rostov State University, Rostov-on-Don, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2002), 36(7), 377-381
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Kluwer Academic/Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aminoketones and aminoalcs. of the imidazo[1,2-a]benzimidazole series were synthesized and characterized with respect to pharmacol. properties. Most of the synthesized compds. exhibited a moderate antioxidant effect. Aminoketones produced a membrane-stabilizing action, reducing the extent of peroxide-induced hemolysis of erythrocytes. These compds. also showed a myotropic spasmolytic effect. Aminoketones and aminoalcs. varied in their ability to increase the working capacity of exptl. animals. Among aminoketones, only one compound reliably increased both the working life of the myocardium and the work performed under the conditions of oxygen deficit in the nutrient medium. All the tested aminoalcs. produced a pos. effect on the work performed. Significant antimicrobial properties were observed for some of the aminoketones.
IT 98354-78-0P
RL: PAC (Pharmacological activity); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and pharmacol. activity of aminoketones and aminoalcs. of the imidazo[1,2-a]benzimidazole series)
RN 98354-78-0 HCAPLUS
CN Ethanone, 2-bromo-1-(9-methyl-2-phenyl-9H-imidazo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:754195 HCAPLUS
DOCUMENT NUMBER: 137:257697
TITLE: Compounds capable of modulating the activity of multidrug transporters, and therapeutic use
INVENTOR(S): Gudkov, Andrei; Kondratov, Roman
PATENT ASSIGNEE(S): The Board of Trustees of the University of Illinois, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

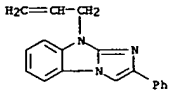
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002076439	A2	20021003	WO 2002-US8896	20020322
WO 2002076439	A3	20040122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003073611	A1	20030417	US 2002-104604	20020322
US 6861431	B2	20050301		

PRIORITY APPLN. INFO.: US 2001-278218P P 20010323
US 2001-300023P P 20010621

AB Methods of modulating the activity of multidrug transporters are disclosed. The methods use compds. that selectively increase or decrease the efflux capabilities of the multidrug transporter. The methods can be used therapeutically to enhance performance of therapeutic drugs, e.g. chemotherapeutic drugs and antibiotics; to promote detoxification of cells and tissues; and to increase or decrease the efficacy of the blood-brain barrier or placental barrier.

IT **342385-23-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compds. modulating activity of multidrug transporters, and therapeutic use)

RN 342385-23-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-(2-propenyl)- (9CI) (CA INDEX NAME)



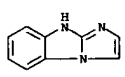
L4 ANSWER 17 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 18 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:719202 HCAPLUS
DOCUMENT NUMBER: 138:89444
TITLE: Structure and spectroscopy of imidazo[1,2-a]imidazoles and imidazo[1,2-a]benzimidazoles
AUTHOR(S): Mas, Thierry; Claramunt, Rosa M.; Santa Maria, M. Dolores; Sanz, Dionisia; Alarcon, Sergio H.; Perez-Torralba, Marta; Elguero, Jose
CORPORATE SOURCE: Dep. de Quim. Organica y Biologia, Fac. de Ciencias, UNED, Madrid, Spain
SOURCE: ARKIVOC (Gainesville, FL, United States) (online computer file) (2002), (5), 48-61
CODEN: AGFUAR
URL: http://www.arkat-usa.org/ark/journal/2002/MManas/MM-340C/MM-340C.pdf
PUBLISHER: Arkat USA Inc.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:89444

AB Two azapentalenes containing fused imidazoles have been synthesized and their NMR (solution and solid state) and UV properties recorded. Tautomerism in the case of imidazo[1,2-a]benzimidazole (9H tautomer)and the structure of the cations resulting from protonation in both cases have been determined Ab initio calcns. (HF/6-311G**) confirm the greater stability of 9H over 1H-imidazo[1,2-a]benzimidazoletautomer.

IT **247-79-0**, 1H-Imidazo[1,2-a]benzimidazole
RL: PRP (Properties)
(ab initio calcn. of tautomer; structure and spectroscopy of imidazo[1,2-a]imidazoles and imidazo[1,2-a]benzimidazoles)

RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

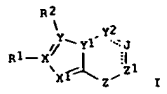
L4 ANSWER 19 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:574934 HCAPLUS
DOCUMENT NUMBER: 137:140524
TITLE: Preparation of imidazo fused heterocycles as corticotropin releasing factor inhibitors
INVENTOR(S): Dubowchik, Gene M.; Han, Xiaojun; Vrudhula, Vivekananda M.; Zuev, Dmitry; Dasgupta, Bireshwar; Michne, Jodi A.
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA
SOURCE: PCT Int. Appl., 321 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002058704	A1	20020801	WO 2002-US841	20020111
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2434558	AA	20020801	CA 2002-2434558	20020111
US 2002183375	A1	20021205	US 2002-44183	20020111
US 6888004	B2	20050503		
EP 1359916	A1	20031112	EP 2002-705754	20020111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
EE 200300342	A	20031215	EE 2003-342	20020111
BR 2002006698	A	20040420	BR 2002-6698	20020111
CN 1499972	A	20040526	CN 2002-807135	20020111
JP 2004531475	T2	20041014	JP 2002-559038	20020111
ZA 2003005531	A	20040727	ZA 2003-5531	20030717
BG 107999	A	20040831	BG 2003-107999	20030717
NO 2003003350	A	20030922	NO 2003-3350	20030725
US 2004254382	A1	20041216	US 2004-767645	20040129
US 2004225130	A1	20041111	US 2004-771661	20040204
US 2004225001	A1	20041111	US 2004-771766	20040204
US 2004235924	A1	20041125	US 2004-772027	20040204

PRIORITY APPLN. INFO.: US 2001-264570P P 20010126
US 2002-44183 A3 20020111
WO 2002-US841 W 20020111

OTHER SOURCE(S): MARPAT 137:140524
GI

L4 ANSWER 19 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



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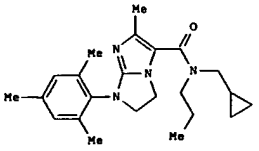


II

AB The title compds. [I; R1 = H, alkyl, haloalkyl, etc.; R2 = CONR3R4, CHZNR3R4, etc.; D = O, S; R3, R4 = H, alkyl, haloalkyl, etc.; or NR3R4 = 5-6 membered heterocycle; X = C; Y = C; X1 = N; Y1 = N; Y2 = N, CH, CH2, CO, etc.; J = a bond, CH, CH2, CO, etc.; Z1 = CH, CH2, CO, etc.; Z = NV (wherein V = (un)substituted Ph, 2- or 3-pyridyl)], useful for the treatment of depression, anxiety, affective disorders, feeding disorders, post-traumatic stress disorder, headache, drug addiction, inflammatory disorders, drug or alc. withdrawal symptoms and other conditions the treatment of which can be effected by the antagonism of the CRF-1 receptor, were prepared E.g., a 5-step synthesis of II (starting with 2,4,6-trimethylaniline) which showed Ki of < 1,000 nM against CRF1 receptor binding.

IT **444323-33-5P**

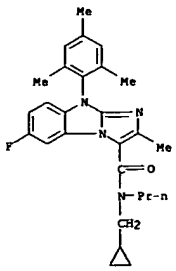
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of imidazo fused heterocycles as corticotropin releasing factor inhibitors)

RN 444323-33-5 HCAPLUS

CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxamide, N-(cyclopropylmethyl)-6-fluoro-2-methyl-N-propyl-9-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 19 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:516032 HCAPLUS

DOCUMENT NUMBER: 138:147102

TITLE: Pharmacokinetics of rhythmidazol upon single intravenous administration

AUTHOR(S): Spasov, A. A.; Stepanov, A. V.; Smirnova, L. A.; Petrov, V. I.; Shabasheva, I. G.

CORPORATE SOURCE: Pharmacology Department, Volgograd State Medical Academy, Volgograd, 400066, Russia

SOURCE: Eksperimental'naya i Klinicheskaya Farmakologiya (2002), 65(3), 57-61

CODEN: EKFAE9; ISSN: 0869-2092

PUBLISHER: Izdatel'stvo Folium

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The kinetics of rhythmidazol (an imidazobenzimiodazole derivative possessing the properties of I, III, and IV class antiarrhythmics) was studied upon a single i.v. introduction in rats (in a dose of 10 mg/kg) and in healthy male volunteers (300 mg/kg). The drug pharmacokinetics in rat blood plasma was characterized by rapid elimination from the systemic blood flow (drug detected by HPLC only within 6 h); the total plasma clearance was 1.43 L/(h kg), the terminal half-elimination time was 1.76 h, and the equilibrium distribution volume (2.42 L/kg) exceeded the total volume of water in the animal organism, which is indicative of a high level of absorption in tissues. The drug is characterized by a low level of binding to blood proteins and erythrocytes. Investigation of the drug distribution between tissues showed evidence of extensive, blood-flow-dependent penetration, with the drug concentration in most tissues exceeding that in the blood plasma. The maximum amts. of rhythmidazol were found in the lungs, spleen, liver, and kidneys. The major excretion route for the unchanged drug is via urine and bile, amounting to 10% and ~1% of the dose introduced, resp., determined within 72 h. The results are indicative of a low probability of the hepatoduodenal circulation of the unchanged substance: about 90% of the drug undergo metabolic transformation. The pharmacokinetics of rhythmidazol in volunteers was also characterized by rapid elimination from the systemic blood flow; the total plasma clearance was 0.89 L/(h kg), the terminal half-elimination time was 2.12 h, and the equilibrium distribution volume was 1.66 L/kg. The obtained results show that the pharmacokinetic profiles of rhythmidazol in rats and humans exhibit a similar character, with a high intensity of distribution and elimination processes.

IT **72025-08-2**, Rhythmidazol

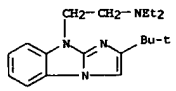
RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiarrhythmics rhythmidazol pharmacokinetics after single i.v. administration in rat and humans)

RN 72025-08-2 HCAPLUS

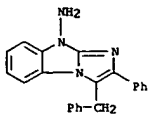
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(1,1-dimethylethyl)-N,N-diethyl-, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



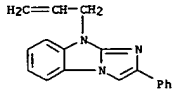
●2 HCl

L4 ANSWER 21 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:506000 HCAPLUS
DOCUMENT NUMBER: 137:352955
TITLE: Reaction of 1,2-diaminobenzimidazole with 1-aryl-2-bromo-3-phenylpropanone. Synthesis of 2-aryl-3-benzyl-9-aminoimidazo[1,2-a]benzimidazoles
AUTHOR(S): Insuasty, Braulio; Fernandez, Fernando; Quiroga, Jairo; Martinez, Roberto; Gavino, Ruben; Angeles, Enrique
CORPORATE SOURCE: Grupo de Investigacion de Compuestos Heterociclicos. Departamento de Quimica. Universidad del Valle, Cali, A. A. 25360, Colombia
SOURCE: Heterocyclic Communications (2002), 8(2), 151-156
CODEN: HCOMEX; ISSN: 0793-0283
PUBLISHER: Freund Publishing House Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:352955
AB The reaction of 1,2-diaminobenzimidazole with one equivalent of 1-aryl-2-bromo-3-phenylpropanones in methanol, leads to the formation of 2-aryl-3-benzyl-9-aminoimidazo[1,2-a]benzimidazoles. The structure elucidation of the products is based on detail NMR anal. of expts. such as 1H.COSY.NOESY.13C.DEPT.HETCOR and COLOC.
IT **474461-65-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of diaminobenzimidazole with arylbromophenylpropanones)
RN 474461-65-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazol-9-amine, 2-phenyl-3-(phenylmethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

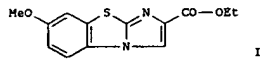
L4 ANSWER 22 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:888505 HCAPLUS
DOCUMENT NUMBER: 136:144859
TITLE: Small molecules that dramatically alter multidrug resistance phenotype by modulating the substrate specificity of P-glycoprotein
AUTHOR(S): Kondratov, Roman V.; Komarov, Pavel G.; Becker, Yigal; Ewenson, Ariel; Gudkov, Andrei V.
CORPORATE SOURCE: Department of Molecular Genetics, University of Illinois, Chicago, IL, 60607, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2001), 98(24), 14078-14083
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
AB By screening a chemical library for the compds. protecting cells from adriamycin (Adr), a series of small mols. was isolated that interfered with the accumulation of Adr in mouse fibroblasts by enhancing efflux of the drug. Isolated compds. also stimulated efflux of Rhodamine 123 (Rho-123), another substrate of multidrug transporters. Stimulation of drug efflux was detectable in the cells expressing P-glycoprotein (P-gp), but not in their P-gp-neg. variants, and was completely reversible by the P-gp inhibitors. A dramatic stimulation of P-gp activity against Adr and Rho-123 by the identified compds. was accompanied by suppression of P-gp-mediated efflux of other substrates, such as Taxol (paclitaxel) or Hoechst 33342, indicating that they act as modulators of substrate specificity of P-gp. Consistently, P-gp modulators dramatically altered the pattern of cross-resistance of P-gp-expressing cells to different P-gp substrates: an increase in resistance to Adr, daunorubicin, and etoposide was accompanied by cell sensitization to Vinca alkaloids, gramicidin D, and Taxol with no effect on cell sensitivity to colchicine, actinomycin D, puromycin, and colcemid, as well as to several non-P-gp substrates. The relative effect of P-gp modulators against different substrates varied among the isolated compds. that can be used as fine tools for analyzing mechanisms of drug selectivity of P-gp. These results raise the possibility of a rational control over cell sensitivity to drugs and toxins through modulation of P-gp activity by small mols.
IT **342385-23-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(small mols. that dramatically alter multidrug resistance phenotype by modulating substrate specificity of P-glycoprotein)
RN 342385-23-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-(2-propenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS

L4 ANSWER 22 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

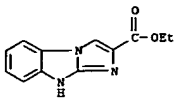
L4 ANSWER 23 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:709209 HCAPLUS
DOCUMENT NUMBER: 136:210034
TITLE: Synthesis, in vitro and in vivo cytotoxicity, and prediction of the intestinal absorption of substituted 2-ethoxycarbonyl-imidazo[2,1-b]benzothiazoles
AUTHOR(S): Trapani, G.; Franco, M.; Latrofa, A.; Reho, A.; Liso, G.
CORPORATE SOURCE: Facolta di Farmacia, Dipartimento Farmaco-Chimico, Universita degli Studi di Bari, Bari, 70125, Italy
SOURCE: European Journal of Pharmaceutical Sciences (2001), 14(3), 209-216
CODEN: EPSCED; ISSN: 0928-0987
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:210034
GI



I

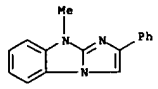
AB The imidazobenzothiazole compds. together with an imidazobenzoxazole, and an imidazobenzoimidazole were prepared and their cytotoxic activity evaluated at the National Cancer Institute (NCI) for testing against a panel of approx. 60 tumor cell lines. Four compds. exhibited interesting in vitro cytotoxic activity. The most active imidazobenzothiazole derivative I was further evaluated as a cytotoxic agent in the hollow fiber assay and showed a score greater than the min. values for xenograft testing together with a net cell kill. Comparison with the results displayed in the in vivo assay by standard antitumor drugs in clin. use revealed a significant in vivo activity of the benzothiazole compound COMPARE analyses for 16 of the compds. against the NCI's standard agent database show poor or no correlation, and it might suggest for these compds. a mechanism of action unrelated to that of any known drug. Furthermore, the benzothiazole I did not show significant antitumor activity in a panel of two xenotransplanted tumors (i.e. colon and non-small cell lung tumors). By computing the polar surface area of the compds. with the MAREA computer program it was established that the most active compds. should experience good intestinal permeability.
IT **188063-33-4**
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(synthesis and in vitro and in vivo cytotoxicity and prediction of intestinal absorption of substituted 2-ethoxycarbonyl-imidazo[b]benzothiazoles)
RN 188063-33-4 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole-2-carboxylic acid, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 23 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 24 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



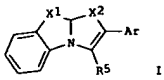
● HBr

L4 ANSWER 24 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:124140 HCAPLUS
DOCUMENT NUMBER: 134:173021
TITLE: Tricyclic heteroaryl compounds and vascular endothelial cell proliferation inhibitors containing the
INVENTOR(S): Matsuhisa, Akira; Mitsumizu, Kiyohiro; Ideyama, Yukitaka; Kuromitsu, Sadao; Ota, Mitsuaki
PATENT ASSIGNEE(S): Yamanouchi Pharmaceutical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001048786	A2	20010220	JP 1999-222333	19990805
PRIORITY APPLN. INFO.:			JP 1999-222333	19990805

OTHER SOURCE(S): MARPAT 134:173021
GI



I

AB The compds. I [Ar = (un)substituted (hetero)aryl; B = (un)substituted benzene ring; R5 = H, lower alkenyl, lower alkynyl, halo, NO2, cyano, OH, lower alkoxy, CO2H, lower alkoxycarbonyl, lower alkylcarbonyl, CONH2, NH2, lower alkylamino, di(lower alkyl)amino, N-heterocyclyl, lower alkanoylamino, cycloalkyl, SH, lower alkylthio, lower alkylsulfenyl, alkylsulfonyl, halo, lower alkyl which may be substituted with halo, OH, lower alkoxy, CO2H, lower alkoxycarbonyl, NH2, lower alkylamino, or di(lower alkyl)amino; if one of dotted lines is a double bond, then the other = direct bond; if X1 = S, O, or NR6 (R6 = H, lower alkyl), then X2 = :N; if X1 = S, NR8 (R8 = lower alkyl), then X2 = :CR7 (R7 = H, lower alkyl); if X1 = N:, then X2 = S, NR6] and vascular endothelial cell proliferation inhibitors containing I or their salts are claimed. I are useful for treatment of solid carcinomas, diabetic retinopathy, etc., in which neovascularization is involved. Pretreatment of HUVEC with 2-(3-Ethoxyphenyl)imidazo[2,1-b]benzothiazole monohydrochloride (preparation given) inhibited VEGF-induced proliferation.

IT 3649-20-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of tricyclic heteroaryl compds. as vascular endothelial cell proliferation inhibitors)

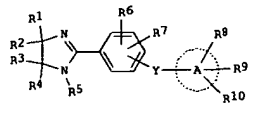
RN 3649-20-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl-, monohydrobromide (9CI) (CA INDEX NAME)

L4 ANSWER 25 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

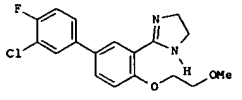
ACCESSION NUMBER: 2000:911225 HCAPLUS
DOCUMENT NUMBER: 134:71593
TITLE: Preparation of imidazoline derivatives for the treatment of diabetes, especially type II diabetes
INVENTOR(S): Paal, Michael; Ruehter, Gerd; Schotten, Theo
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 143 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078726	A1	20001228	WO 2000-US11881	20000619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
GB 2351081	A1	20001220	GB 1999-14222	19990618
PRIORITY APPLN. INFO.:			GB 1999-14222 A	19990618

OTHER SOURCE(S): MARPAT 134:71593
GI



I



II

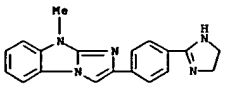
AB The title compds. [I; R1-R4 = H, alkyl; R1 and R3, together with the carbon atoms to which they are attached, combine to form a C3-7 carbocyclic ring and R2 and R4 = H, alkyl; R1 and R2, together with the carbon atom to which they are attached combine to form a C3-7 spirocarbocyclic ring and R3 and R4 = H, alkyl; R3 and R4, together with the carbon atom to which they are attached combine to form a C3-7 spirocarbocyclic ring and R1 and R2 = H, alkyl; R5 = H, alkyl, aryl, etc.;

L4 ANSWER 25 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
R6 = H, alkyl, alkoxy, etc.; R7 = H, alkyl, alkoxy, etc.; Y = NHCONH, NHCO, a bond, etc.; A = a monocyclic or bicyclic ring; R8 = H, alkyl, alkenyl, etc.; R9, R10 = H, alkyl, alkoxy, etc.], useful for the treatment of diabetes, diabetic complications, metabolic disorders, or related diseases where impaired glucose disposal is present (no data), were prepd. and formulated. E.g., a multi-step synthesis of the imidazoline II.HCl was given. The compds. I are effective at 0.1-5 mg/kg/day.

IT **314239-60-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of imidazoline derivs. as antidiabetics)

RN 314239-60-6 HCAPLUS

CN 9H-Imidazo[1,2-a]benzimidazole, 2-[4-(4,5-dihydro-1H-imidazol-2-yl)phenyl]-9-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 26 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:859622 HCAPLUS

DOCUMENT NUMBER: 134:216795

TITLE: Search for antihistamine drugs among imidazobenzimidazoles and triazolobenzimidazoles

AUTHOR(S): Spasov, A. A.; Chernikov, M. V.; Anisimova, V. A.; Kuz'menko, T. A.; Osipova, M. M.

CORPORATE SOURCE: Volgograd State Medical Academy, Volgograd, Russia

SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2000), 34(2), 48-52
CODEN: PCJOAU; ISSN: 0091-150X

PUBLISHER: Consultants Bureau

DOCUMENT TYPE: Journal

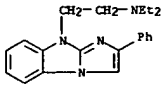
LANGUAGE: English

AB The authors have studied the H1, H2, and H3-histamine blocking (HB) activity of derivs. belonging to tricyclic benzimidazole systems. N1 And N9-substituted imidazo[1,2-a]imdazoles, N4-substituted 1,2,4-triazolo[1,5-a]benzimidazoles, and N9-substituted 2,3-dihydroimidazo[1,2-a]benzimidazoles were the ring systems tested for histamine-blocking activity.

IT **23572-32-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(search for antihistamine drugs among imidazobenzimidazoles and triazolobenzimidazoles)

RN 23572-32-9 HCAPLUS

CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 27 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:583058 HCAPLUS

DOCUMENT NUMBER: 134:162964

TITLE: Tetracyclic heteroaromatic systems. Part II. Benzimidazo[1,2-a]benzimidazoles

AUTHOR(S): Khan, Misbahul Ain; Ribeiro, Vera Lucia Teixeira

CORPORATE SOURCE: Laboratorio de Quimica Medicinal, Universidade Federal Fluminense, Niteroi, Brazil

SOURCE: Pakistan Journal of Scientific and Industrial Research (2000), 43(3), 168-170
CODEN: PSIRAA; ISSN: 0030-9885

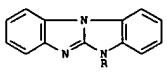
PUBLISHER: Pakistan Council of Scientific and Industrial Research

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:162964

GI



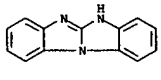
I

AB Benzimidazo[1,2-a]benzimadozoles (I; R = H, Me, Et) were synthesized by the trialkyl phosphite-induced deoxygenation and thermolysis of 1-(o-nitrophenyl)- and 1-(o-azidophenyl)benzimidazoles. Spectral and other properties of the products and intermediates are reported.

IT **28890-99-5P**, 5H-Benzimidazo[1,2-a]benzimidazole
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 28890-99-5 HCAPLUS

CN 5H-Benzimidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 28 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:511144 HCAPLUS

DOCUMENT NUMBER: 134:141365

TITLE: Anti HIV, antibacterial and antifungal potential of a variety of heterocyclic compounds containing nitrogen and/or sulphur

AUTHOR(S): Sondhi, S. M.; Verma, R. P.; Singhal, Nidhi; Sharma, V. K.; Husiu, C.; Vargiu, L.; Longu, S.; La Colla, P.

CORPORATE SOURCE: Department of Chemistry, University of Roorkee, Roorkee, 247 667, India

SOURCE: Indian Journal of Pharmaceutical Sciences (2000), 62(1), 71-76
CODEN: IJSIDW; ISSN: 0250-474X

PUBLISHER: Indian Pharmaceutical Association

DOCUMENT TYPE: Journal

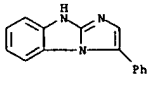
LANGUAGE: English

AB 9-Acridinyl imino/amino derivs. (Ia-f, IIa-b, III, IV and V), pyrimido oxazole derivative (VIa), imidazopyrimidine thiones (VIb, VII), pyrimidooxazinethione (VIc), 1-(2-aminoaryl)-6-hydroxy-4,4,6-trimethyl-1,4,5,6-tetrahydropyrimidine-2(3H)-thiones (VIIIa-c), 1-(2-nitroaryl)-6-methoxy-6-methyl-1,4,5,6-tetrahydro pyrimidine-2-(3H) thiones (IXa,b), 1-(2-hydroxy phenyl)-4,4,6-trimethyl-1, 4-dihydropyrimidine-2(3H)-thione (X), condensed tricyclic pyrimidine derivs. (XIa-h) pyrimido anthraquinonimidazole (XII), N,N'-disubstituted thioureas (XIIIa-c), 1,2-dithia-5,8-diazacyclodeca-4,8-diene (XIV), 1,2-dithia-5,8-diazacyclodecane dihydrochloride (XV), 3-(o-aminophenyl)-2-imino-4-phenyl-4-thiazoline (XVI), 9H-imidazolo [1,2-a] benzimidazoles (XVIIa-c), benzimidazole derivative (XVIII), Schiff's bases (XIX, XXa-b), 1-(2-methylamino-4-Ph thiazole)-2-hydroxy-naphthalene (XXI), compound XXII and acridone derivative XXIII were synthesized by the procedures developed earlier and were screened for anti HIV, antibacterial and antifungal activities. Compds. XVIIb and XVIIc showed antibacterial activity against Streptococcus D at concns. slightly higher than those of streptomycin (1.6 μM) and compound XV showed mild activity against Salmonella (MIC = 66 μM). When tested against yeast representatives, compound XV was active against C-neoformans (MIC = 22 μM), compds. XV and XXa showed mild activity against Candida at 66 μM but this concentration was cytotoxic for MT-4 cells. Only compound XIa was capable of protecting MT-4 cells from the cytopathic effect induced by HIV-1 (EC50 = 115 μM). All other compds. were found to be inactive.

IT **75542-79-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-HIV, antibacterial, and antifungal potential of heterocyclic compds. containing N and/or S)

RN 75542-79-9 HCAPLUS

CN 1H-Imidazo[1,2-a]benzimidazole, 3-phenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:124779 HCAPLUS
DOCUMENT NUMBER: 132:265148
TITLE: Synthesis and study of the hypotensive and antiarrhythmic activity of 2,9-disubstituted 3-alkoxycarbonylimidazo[1,2-a]benzimidazoles
AUTHOR(S): Anisimova, V. A.; Kuz'menko, T. A.; Spasov, A. A.; Bocharova, I. A.; Orobinskaya, T. A.
CORPORATE SOURCE: Research Institute of Physical and Organic Chemistry, Rostov State University, Rostov-on-Don, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (1999), 33(7), 361-365
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:265148
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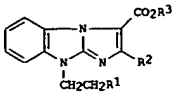
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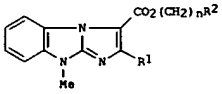
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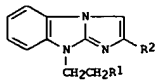
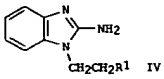
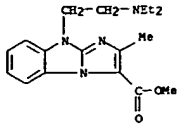

III


IV

AB A series of 3-(alkoxycarbonyl)imidazo[1,2-a]benzimidazoles, in which (dialkylamino)alkyl groups were introduced either at the 9-position of the tricyclic nucleus, e.g., I (R1 = Et2N, piperidino, morpholino; R2 = Me, Ph, 1-naphthyl; R3 = Me, Et), or at the alkoxycarbonyl group, e.g., II (n = 2, 3; R1 = Me, Ph; R2 = Et2N, piperidino, morpholino, Me2N), were prepared from the corresponding 2,9-disubstituted imidazo[1,2-a]benzimidazoles III and 1-[(dialkylamino)alkyl]-2-aminobenzimidazoles IV. The hypotensive and antiarrhythmic activities of these compds. were also studied. The effects of the most active compds., I (R1 = morpholino, R2 = R3 = Me) and II (R1 = Me; R2 = Et2N, morpholino), exceed that of the reference drug dibazole.
IT 41472-74-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and study of the hypotensive and antiarrhythmic activity of 2,9-disubstituted 3-(alkoxycarbonyl)imidazo[1,2-a]benzimidazoles)
RN 41472-74-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 9-[2-(diethylamino)ethyl]-2-methyl-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 29 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

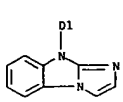


●2 HCl

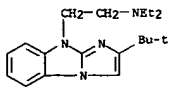
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 30 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:359097 HCAPLUS
DOCUMENT NUMBER: 131:165272
TITLE: The effect of compounds with antioxidant properties on blood platelet functional activity
AUTHOR(S): Spasov, A. A.; Ostrovsky, O. V.; Lvakhnenko, I. V.; Kosolapov, V. A.; Anisimova, V. A.
CORPORATE SOURCE: Department of Pharmacology, Volgograd Medical Academy, Volgograd, Russia
SOURCE: Eksperimental'naya i Klinicheskaya Farmakologiya (1999), 62(1), 38-40
CODEN: EKFAE9; ISSN: 0869-2092
PUBLISHER: Izdatel'stvo Folium
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The effect of antioxidant compds. ionol and mexidol and the new phenol derivative N9-imidazo-(1,2a)-benzymidazol (PY-185) on the functional activity of blood platelets was studied. All the compds. under study effectively inhibited blood platelet aggregation both in vitro and in administration into rats, as a result of which the blood thrombogenic potential reduced.
IT 238097-66-0, PY 185
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antioxidant compds. effect on blood platelet aggregation)
RN 238097-66-0 HCAPLUS
CN Benzenediol, 9H-imidazo[1,2-a]benzimidazol-9-yl- (9CI) (CA INDEX NAME)

2 (D1—OH)



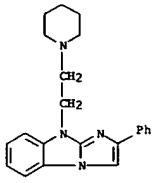
L4 ANSWER 31 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:242387 HCAPLUS
DOCUMENT NUMBER: 131:97230
TITLE: Correction of cardiotoxic effects of cardiac antiarrhythmics with befol, suphan, and their combinations
AUTHOR(S): Galenko-Yaroshevskii, P. A.; Khankoeva, A. I.; Uvarov, A. V.; Bartashevich, V. V.; Popov, P. B.; Sirotenko, D. V.; Boldin, V. B.
CORPORATE SOURCE: Department of Pharmacology, Kuban Medical Academy, Krasnodar, Russia
SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (1998), 125(6), 567-572
CODEN: BEXBAN; ISSN: 0007-4888
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Antidepressant befol, non-glycoside cardiotonic suphan, and their combinations were shown to have different ability to decrease cardiotoxic (arrhythmogenic) effect of novocainamide, lidocaine, bonnecor, obsidan, cordarone, verapamil, and rhythmidazol.
IT 72025-08-2, Rhythmidazol
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(correction of cardiotoxic effects of cardiac antiarrhythmics with befol and suphan and their combinations)
RN 72025-08-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(1,1-dimethylethyl)-N,N-diethyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

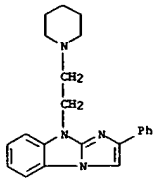
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 32 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:89959 HCAPLUS
DOCUMENT NUMBER: 130:291301
TITLE: Dependence of the antiplatelet and antiarrythmic activities of the benzimidazole calcium blockers on their anticalmodulin action
AUTHOR(S): Spasov, A. A.; Larionov, N. P.; Sibiryakova, T. B.; Verovskii, V. E.; Anisimova, V. A.; Kovalev, S. G.; Baldenkov, G. N.; Men'shikov, M. Yu.; Kuz'menko, T. A.; Kuz'menko, V. V.
CORPORATE SOURCE: Volgograd. Med. Akad., Volgograd, Russia
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1998), 32(10), 22-27
CODEN: KHFZAN; ISSN: 0023-1134
PUBLISHER: Izdatel'stvo Folium
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Claster anal. of 55 benzimidazoles allows to consider the antiplatelet and antiarrythmic activities of these calcium channel blockers as a function of their calmodulin-inhibiting action.
IT 23572-35-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(antiplatelet and antiarrythmic activities of benzimidazole calcium blockers as function of their anticalmodulin action)
RN 23572-35-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-[2-(1-piperidinyl)ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)



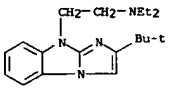
●2 HCl

L4 ANSWER 33 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:89955 HCAPLUS
DOCUMENT NUMBER: 130:291550
TITLE: Dependence of the spasmolytic and gastro-protective effects of benzimidazole derivatives on their anticalmodulin action
AUTHOR(S): Spasov, A. A.; Larionov, N. P.; Sibiryakova, T. B.; Verovskii, V. E.; Anisimova, V. A.; Dudchenko, G. P.; Baldenkov, G. N.; Men'shikov, M. Yu.
CORPORATE SOURCE: Volgograd. Med. Akad., Volgograd, Russia
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1998), 32(10), 17-21
CODEN: KHFZAN; ISSN: 0023-1134
PUBLISHER: Izdatel'stvo Folium
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The authors studied the dependence of the spasmolytic, hypoglycemic, and gastro-protective effects of benzimidazole derivs. on their anticalmodulin action. The results showed that only compds. with high anticalmodulin activity are effective as spasmolytics and gastroprotectants.
IT 23572-35-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(spasmolytic and gastro-protective effects of benzimidazole derivs. in relation to their anticalmodulin action)
RN 23572-35-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-[2-(1-piperidinyl)ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

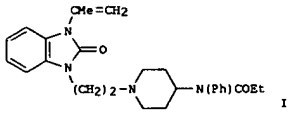
L4 ANSWER 34 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:731683 HCAPLUS
DOCUMENT NUMBER: 130:133880
TITLE: Cardiotoxic effects of the antiarrhythmic rhythmidazol and their correction by suphan, befol, and their combinations
AUTHOR(S): Galenko-Yaroshevskii, P. A.; Skibitskii, V. V.; Boldin, V. B.; Seredenko, M. M.; Khankoeva, A. I.; Uvarov, A. V.
CORPORATE SOURCE: Department of Pharmacology, Kuban Medical Academy, Krasnodar, Russia
SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (1998), Volume Date 1997, 124(12), 1189-1193
CODEN: BEXBAN; ISSN: 0007-4888
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antiarrhythmic rhythmidazol produces a cardiotoxic effect that can be corrected by suphan, befol, and their combinations, as evidenced by normalization of ultrastructural organization of cardiomyocytes and myocardial oxygen consumption by these drugs.
IT 72025-08-2, Rhythmidazol
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cardiotoxic effects of antiarrhythmic rhythmidazol and their correction by suphan, befol, and their combinations)
RN 72025-08-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(1,1-dimethylethyl)-N,N-diethyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

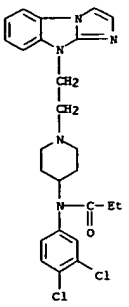
L4 ANSWER 35 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:20196 HCAPLUS
DOCUMENT NUMBER: 128:162735
TITLE: Pharmacological profile of a novel series of NK1 antagonists. In vitro and in vivo potency of benzimidazolone derivatives
AUTHOR(S): Remond, G.; Portevin, B.; Bonnet, J.; Canet, E.; Regoli, D.; De Nanteuil, G.
CORPORATE SOURCE: Division D of Medicinal Chemistry, Institut de Recherches Servier, Suresnes, 92150, Fr.
SOURCE: European Journal of Medicinal Chemistry (1997), 32(11), 843-868
CODEN: EJMCA5; ISSN: 0223-5234
PUBLISHER: Editions Scientifiques et Medicales Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB By low throughput examination of our chemical library, I was selected as a lead NK1 antagonist with a Ki of 7.1 nM. Modifications of its structure led to the finding that the in vitro potency could be markedly enhanced by disubstituting the anilino Ph ring. Human binding data correlated rather well with results obtained with in vitro animal smooth muscle prepns. Several agents proved to possess antinociceptive properties as exemplified in the hot-plate test in mice; one of the compound had ED50 of 0.001 and 0.3 mg/kg after i.v. and oral administrations, resp. Another compound was a potent inhibitor of SP-induced bronchoconstriction in guinea-pigs with an ED50 between 0.1 and 0.03 mg/kg i.v. Oral administration of this compound inhibited SP-induced bronchial hypersensitivity in mice, with an ID50 of around 3 mg/kg.
IT 202858-97-7P
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and pharmacol. profile of benzimidazolone NK1 antagonists)
RN 202858-97-7 HCAPLUS
CN Propanamide, N-(3,4-dichlorophenyl)-N-[1-[2-(9H-imidazo[1,2-a]benzimidazol-9-yl)ethyl]-4-piperidinyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 35 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

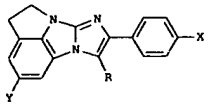


REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

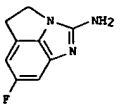
L4 ANSWER 36 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:569198 HCAPLUS
DOCUMENT NUMBER: 127:190734
TITLE: 4,5-Dihydroimidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole derivatives, their preparation, and their therapeutic application as anticonvulsants, anxiolytics, and hypnotics
INVENTOR(S): George, Pascal; Sevrin, Mireille; Peynot, Michel Charles; Evanno, Yannick
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: Fr. Demande, 26 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2741073	A1	19970516	FR 1995-13255	19951109
FR 2741073	B1	19971212		
PRIORITY APPLN. INFO.:			FR 1995-13255	19951109

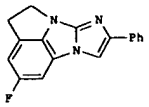
OTHER SOURCE(S): MARPAT 127:190734
GI



I



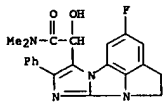
II



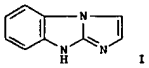
III

AB Title compds. I [Y = H, halo; X = cyano, CO2H, CO2Et, CONH2, and also (when Y = halo) X = H, halo, or alkyl; R = H, CH2CO2R1, CH2CONR2R3; R1, R2, R3 = H, alkyl] and their salts are disclosed. For instance, cyclocondensation of 5-fluoro-2,3-dihydro-1H-indol-7-amine with BrCN in aqueous Na2CO3 gave the intermediate pyrrolobenzimidazole derivative II. This compound underwent N-alkylation by BrCH2COPh, followed by cyclization of the product under Dean-Stark conditions, to give title compound III. I bound to benzodiazepine receptors (α1 and α2) with IC50 of 1-1000 nM,

L4 ANSWER 36 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
and showed anticonvulsant, anxiolytic, and hypnotic activity in animal expts.
IT 194476-47-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of dihydroimidazopyrrolobenzimidazole derivs. as anticonvulsants, anxiolytics, and hypnotics)
RN 194476-47-6 HCAPLUS
CN Imidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole-9-acetamide, 2-fluoro-4,5-dihydro-α-hydroxy-N,N-dimethyl-8-phenyl- (9CI) (CA INDEX NAME)

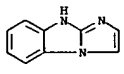


L4 ANSWER 37 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:432790 HCAPLUS
DOCUMENT NUMBER: 127:135768
TITLE: Gas-phase pyrolysis of 1-(2-azidophenyl)imidazole
AUTHOR(S): Blake, Alexander J.; Clark, Bernard A. J.; Mcnab, Hamish; Sommerville, Craig C.
CORPORATE SOURCE: Department of Chemistry, The University of Edinburgh, Edinburgh, EH9 3JJ, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1997), (11), 1605-1608
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:135768
GI



I

AB Flash vacuum pyrolysis of the title azide gave only imidazo[1,2-a]benzimidazole (I) via highly regioselective insertion of the triplet nitrene intermediate into the 2-CH bond of the imidazole ring. The x-ray crystal structure and NMR spectroscopic properties of I are discussed in detail.
IT 247-79-0P, 1H-Imidazo[1,2-a]benzimidazole
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)

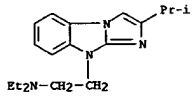


REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 38 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:356395 HCAPLUS
DOCUMENT NUMBER: 126:325517
TITLE: Imidazobenzimidazole derivative as antiarrythmic agent
INVENTOR(S): Simonov, Andrej M.; Kovalev, Gennadij V.; Anisimova, Vera A.; Spasov, Aleksandr A.; Ermilova, Elvira S.; Porotikov, Vladimir I.; Kaverina, Natalya V.; Pyatin, Boris M.; Merinova, Serafima V.; Avdyunina, Nina I.
PATENT ASSIGNEE(S): Nauchno-Issledovatelskij Institut Fizicheskoj I Organicheskoj Khimii Rostovskogo Gosudarstvennogo Universiteta, Russia; Volgogradskij Meditsinskij Institut; Nauchno-Issledovatelskij Institut Farmakologii Ramn
SOURCE: Russ. From: Izobreteniya 1996, (30), 146.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

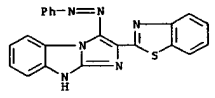
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2068261	C1	19961027	RU 1983-3655901	19831103
PRIORITY APPLN. INFO.:			SU 1983-3655901 A	19831103

AB Title only translated.
IT **109573-27-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(imidazobenzimidazole derivative as antiarrythmic agent)
RN 189573-27-1 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-(1-methylethyl)-, dihydrochloride (9CI) (CA INDEX NAME)



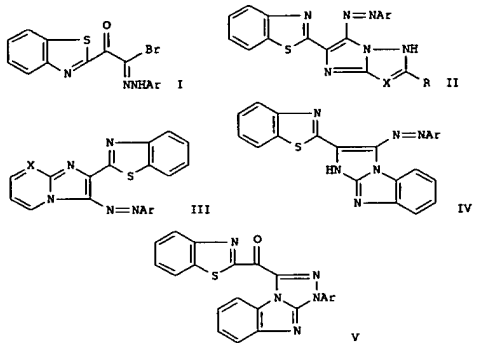
●2 HCl

L4 ANSWER 39 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
(prepn. of imidazopyrazole, -triazole, -pyridine, -pyrimidine, -benzimidazole, and triazolobenzimidazole derivs.)
RN 188845-61-6 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-(2-benzothiazolyl)-3-(phenylazo)- (9CI) (CA INDEX NAME)



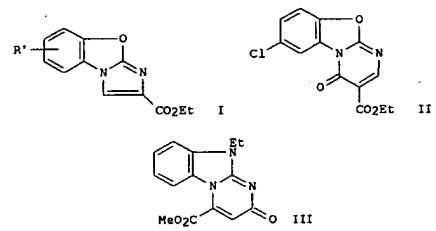
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 39 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:219187 HCAPLUS
DOCUMENT NUMBER: 126:277442
TITLE: One-pot synthesis of imidazo[1,2-b]pyrazole, imidazo[1,2-b]-1,2,4-triazole, imidazo[1,2-a]pyridine, imidazo[1,2-a]pyrimidine, imidazo[1,2-a]benzimidazole, and 1,2,4-triazolo[4,3-a]benzimidazole derivatives
AUTHOR(S): Farag, Ahmad M.; Dawood, Kamal M.
CORPORATE SOURCE: Fac. Sci., Univ. Cairo, Giza, Egypt
SOURCE: Heteroatom Chemistry (1997), 8(2), 129-133
CODEN: HETCE8; ISSN: 1042-7163
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



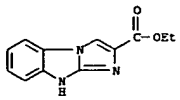
AB Hydrazonoyl bromides I (Ar = Ph, 4-MeC6H4, 4-ClC6H4) react with 5-amino-3-phenyl-1H-pyrazole, 5-amino-1H-1,2,4-triazole, 2-aminopyridine, 2-aminopyrimidine, and 2-aminobenzimidazole to afford the corresponding imidazo[1,2-b]pyrazoles II (X = CH, R = Ph), imidazo[1,2-b]-1,2,4-triazoles II (X = N, R = H), imidazo[1,2-a]pyridines III (X = CH), imidazo[1,2-a]pyrimidines III (X = N), and imidazo[1,2-a]benzimidazoles IV, resp. Compds. I reacted also with 2-(methylthio)benzimidazole to give 1,2,4-triazolo[4,3-a]benzimidazole derivs. V.
IT **188845-61-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)

L4 ANSWER 40 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:112751 HCAPLUS
DOCUMENT NUMBER: 126:212114
TITLE: Synthesis and benzodiazepine receptor binding of some imidazo-, pyrimido[2,1-b]benzoxazoles and pyrimido[1,2-a]benzimidazoles
AUTHOR(S): Trapani, G.; Franco, M.; Latrofa, A.; Genchi, G.; Iacobazzi, V.; Ghiani, C. A.; Maciocco, E.; Liso, G.
CORPORATE SOURCE: Dipartimento Farmaco-Chimico, Facolta di Farmacia, Universita degli Studi di Bari, Bari, 70125, Italy
SOURCE: European Journal of Medicinal Chemistry (1997), 32(1), 83-89
CODEN: EJMCA5; ISSN: 0223-5234
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB A series of imidazo[2,1-b]benzoxazoles I (R' = H, 6-Me, 7-Me, 6-Cl), pyrimido[2,1-b]benzoxazoles, e.g., II, and pyrimido[1,2-a]benzimidazoles, e.g., III, was synthesized and evaluated for affinity at the benzodiazepine receptor (BZR). These compds. generally possess BZR binding affinities lower than those observed for the corresponding benzothiazole analogs. However, imidazobenzoxazole I (R' = 6-Cl) (IV) possesses high binding affinity, showing an IC50 value of 77 nM. The pharmacol. profile of IV was predicted by [35S]TBPS binding as inverse agonist whereas antagonist or partial agonist activity was suggested by the GABA ratio value. Hence, a contrasting predictive capability of GABA ratio and [35S]TBPS binding was observed Compound IV should possess partial inverse agonist activity at BZR, because its [35S]TBPS binding data is comparable to those of FG-7142.
IT **188063-33-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and benzodiazepine receptor binding affinity of imidazo/pyrimidobenzoxazoles and pyrimidobenzimidazoles)
RN 188063-33-4 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole-2-carboxylic acid, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 40 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L4 ANSWER 41 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

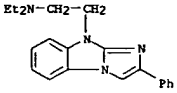
ACCESSION NUMBER: 1997:12411 HCAPLUS
DOCUMENT NUMBER: 126:42695
TITLE: 9-Diethylaminoethyl-2-phenylimidazo[1,2]-benzimidazole nitrate salt with antisecretory and antiulcer activities
INVENTOR(S): Kovalev, Gennadij V.; Spasov, Aleksandr A.; Anisimova, Vera A.; Seredenin, Sergej B.; Pyatin, Boris M.; Avdyunina, Nina I.; Sherbakova, Olga V.; Loginov, Anatolij S.; Bendikov, Eduard A.; Bakunov, Pavel A.
PATENT ASSIGNEE(S): Nauchno-Issledovatelskij Institut Fizicheskoj I Organicheskoj Khimii Rostovskogo Gosudarstvennogo Universiteta, Russia; Volgogradskij Meditsinskij Institut; Nauchno-Issledovatelskij Institut Farmakologii; Tsentralnyj Nauchno-Issledovatelskij Institut Gastroenterologii
SOURCE: Russ. From: Izobreteniya 1996, (11), 136.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2058142	C1	19960420	RU 1991-4935357	19910517
PRIORITY APPLN. INFO.:			SU 1991-4935357 A	19910517

AB Title only translated.
IT **184882-31-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diethylaminoethylphenylimidazobenzimidazole nitrate with antisecretory and antiulcer activities)
RN 184882-31-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, nitrate (9CI) (CA INDEX NAME)

CM 1

CRN 33729-71-4
CMF C21 H24 N4



CM 2

CRN 7697-37-2
CMF H N O3

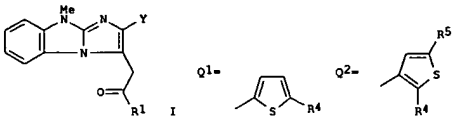
L4 ANSWER 41 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 42 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:313505 HCAPLUS
DOCUMENT NUMBER: 124:343306
TITLE: Preparation of benzodiazepine receptor-binding 2-thienylimidazo[1,2-a]benzimidazole-3-acetic acid-derivative pharmaceuticals
INVENTOR(S): Sevrin, Mireille; Evanno, Yannick; George, Pascal
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: Fr. Demande, 19 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

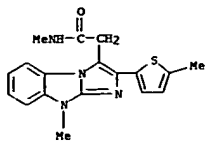
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2722500	A1	19960119	FR 1994-8712	19940713
FR 2722500	B1	19960809		
PRIORITY APPLN. INFO.:			FR 1994-8712	19940713

OTHER SOURCE(S): MARPAT 124:343306
GI



AB The title compds. [I; R1 = OH, alkoxy, alkylamino, dialkylamino; Y = Q1, Q2; R4, R5 = (un)branched alkyl], useful as anxiolytics which bind to benzodiazepine receptors as anticonvulsants and as hypnotics, are prepared Thus, I (R1 = HNMe, Y = Q1, R4 = Me), m.p. 248-249°, was prepared from Et 2,2-diethoxyacetate in 4 steps.
IT **176760-35-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-thienylimidazo[1,2-a]benzimidazole-3-acetic acid derivative pharmaceuticals)
RN 176760-35-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-acetamide, N,9-dimethyl-2-(5-methyl-2-thienyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

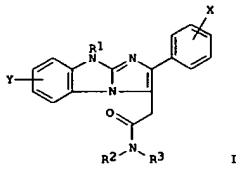


L4 ANSWER 43 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:311278 HCAPLUS
DOCUMENT NUMBER: 124:343307
TITLE: Preparation of benzodiazepine receptor-binding 9H-imidazo[1,2-a]benzimidazole-3-acetamide pharmaceuticals
INVENTOR(S): George, Pascal; De Peretti, Danielle; Sevrin, Mireille; Schmitt, Jean Paul
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: Fr. Demande, 19 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2722501	A1	19960119	FR 1994-8713	19940713
FR 2722501	B1	19960809		
PRIORITY APPLN. INFO.:			FR 1994-8713	19940713

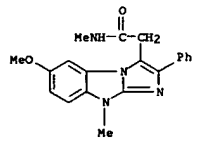
OTHER SOURCE(S): MARPAT 124:343307
GI



I

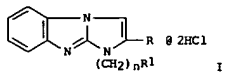
AB The title compds. (I; R1 = Me; R2, R3 = H, Me; when X = H, halogen, or Me, then Y = OH, MeO, and when X = OH, then Y = H), useful as benzodiazepine receptor-binding anxiolytics, hypnotics, anticonvulsants, and pharmaceuticals, are prepared Thus, 6-methoxy-N,N,9-trimethyl-2-(4-methylphenyl)-9H-imidazo[1,2-a]benzimidazole-3-acetamide was reacted with BBr3 and the reaction mixture neutralized with aqueous NaHCO3, producing I (R1-R3 = Me, X = 4-Me, Y = 6-OH), m.p. 268.6-269.9°.
IT 176727-72-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of benzodiazepine receptor-binding 9H-imidazo[1,2-a]benzimidazole-3-acetamide pharmaceuticals)
RN 176727-72-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-acetamide, 6-methoxy-N,9-dimethyl-2-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 43 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



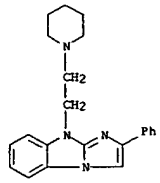
L4 ANSWER 44 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:26940 HCAPLUS
DOCUMENT NUMBER: 124:202110
TITLE: 2-Aryl-1-[(dialkylamino)alkyl]imidazo[1,2-a]benzimidazoles: synthesis and calcium ion antagonism
AUTHOR(S): Anisimova, V. A.; Spasov, A. A.; Levchenko, M. V.; Aleksandrova, E. A.
CORPORATE SOURCE: NII Fiz. Org. Khim., Rostov-on-Don, Russia
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1995), 29(10), 17-19
CODEN: KHFZAN; ISSN: 0023-1134
PUBLISHER: Meditsina
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

AB Title compds. I [R = 1-naphthyl, (un)substituted phenyl; n = 2, 3; R1 = piperidino, morpholino, NEt2] were prepared in several steps from 2-[(hydroxyalkyl)amino]benzimidazoles. The activities of I as calcium ion antagonists were determined
IT 23572-35-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(calcium ion antagonism of)
RN 23572-35-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-[2-(1-piperidinyl)ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)

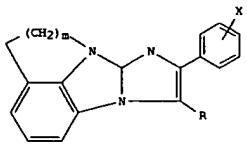


●2 HCl

L4 ANSWER 45 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:997842 HCAPLUS
DOCUMENT NUMBER: 124:176096
TITLE: Preparation of 5,6-dihydro-4H-imidazo[2',1':2,3]imidazo[4,5,1-ij]quinoline and 4,5-dihydroimidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole anticonvulsants and anxiolytics
INVENTOR(S): George, Pascal; Sevrin, Mireille; Peynot, Michel
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 682025	A1	19951115	EP 1995-401014	19950503
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
FR 2719843	A1	19951117	FR 1994-5715	19940510
FR 2719843	B1	19960607		
CA 2148951	AA	19951111	CA 1995-2148951	19950509
FI 9502249	A	19951111	FI 1995-2249	19950509
NO 9501811	A	19951113	NO 1995-1811	19950509
AU 9517935	A1	19951116	AU 1995-17935	19950509
CN 1115761	A	19960131	CN 1995-105469	19950509
JP 08053450	A2	19960227	JP 1995-110538	19950509
ZA 9503750	A	19960402	ZA 1995-3750	19950509
US 5512590	A	19960430	US 1995-437053	19950509
HU 72666	A2	19960528	HU 1995-1369	19950509
IL 113672	A1	19971120	IL 1995-113672	19950509

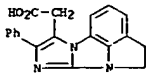
PRIORITY APPLN. INFO.: FR 1994-5715 A 19940510
OTHER SOURCE(S): MARPAT 124:176096
GI



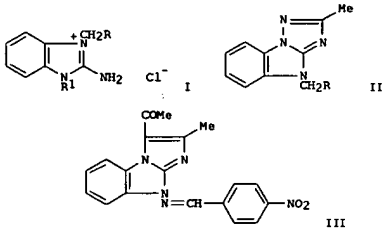
I

AB The title compds. [I; R = H, CH2CO2R1, CH2CON(R2)R3; R1-R3 = H, alkyl; X = H, F, Cl, alkyl, alkoxy, OH; n = 1, 2] (e.g., 8-(4-fluorophenyl)-N-methyl-4,5-dihydroimidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole-9-acetamide], useful as anticonvulsants, anxiolytics, and hypnotics, are prepared
IT 173666-77-8P

L4 ANSWER 45 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of 5,6-dihydro-4H-imidazo[2',1':2,3]imidazo[4,5,1-ij]quinoline and 4,5-dihydroimidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole anticonvulsants and anxiolytics)
RN 173666-77-8 HCAPLUS
CN Imidazo[1,2-a]pyrrolo[1,2,3-cd]benzimidazole-9-acetic acid, 4,5-dihydro-8-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 46 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:789055 HCAPLUS
DOCUMENT NUMBER: 124:8695
TITLE: Acetic anhydride-induced cyclization of quaternary 1,2-diaminobenzimidazolium salts containing an activated methylene group at position 3
AUTHOR(S): Kuz'menko, T. A.; Kuz'menko, V. V.; Anisimova, V. A.
CORPORATE SOURCE: NII Fiz. Org. Khim., Rostov-on-Don, Russia
SOURCE: Zhurnal Organicheskoi Khimii (1995), 31(1), 106-12
CODEN: ZORKAE; ISSN: 0514-7492
PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 124:8695
GI

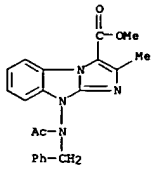


I II

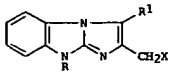
III

AB Boiling title salts I (R = COMe, COOEt, CN; R1 = NH2) in Ac2O containing K2CO3 gave triazolobenzimidazoles (II, same R). Similar treatment of I (R = COMe, COOEt, CN; R1 = arylideneamino) gave imidazobenzimidazoles such as III.
IT 171414-05-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acetic anhydride-induced cyclization of diaminobenzimidazolium salts containing an activated methylene group)
RN 171414-05-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 9-[acetyl(phenylmethyl)amino]-2-methyl-, methyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 46 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

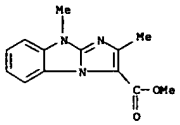


L4 ANSWER 47 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:376571 HCAPLUS
DOCUMENT NUMBER: 123:111934
TITLE: Investigations of imidazo[1,2-a]benzimidazole derivatives. 26. 2-(Halomethyl)imidazo[1,2-a]benzimidazoles and their reactivity
AUTHOR(S): Anisimova, V. A.; Lukova, O. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, Russia
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1994), (3), 369-76
CODEN: KGSSAQ; ISSN: 0132-6244
PUBLISHER: Latviiskii Institut Organicheskogo Sinteza
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

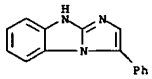


I

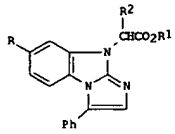
AB Title compds. I (R = Me, CH2Ph; R1 = H; X = Cl) were prepared by cyclocondensation of 1-methyl- and 1-benzyl-2-benzimidazolamine with 1,3-dichloroacetone. I (R = Me, CH2Ph; R1 = COMe, COOMe; X = Br) were prepared by radical bromination of I (R = Me, CH2Ph; R1 = COMe, COOMe; X = H). The 2-(halomethyl) compds. underwent facile nucleophilic substitution of the halogen atom.
IT 40783-82-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and reactions of (halomethyl)imidazobenzimidazoles)
RN 40783-82-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 2,9-dimethyl-, methyl ester (9CI) (CA INDEX NAME)



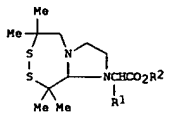
L4 ANSWER 48 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:265539 HCAPLUS
DOCUMENT NUMBER: 122:122550
TITLE: Anti-amoebic and anthelmintic evaluation of heterocyclic compounds containing nitrogen and/or sulfur
AUTHOR(S): Sondhi, S. M.; Sahu, R.; Magan, Archana; Ghosh, D. K.; Mukhopadhya, R. M.; Chatterjee, G. K.; Das, A. K.; Chaudhuri, S. K.
CORPORATE SOURCE: Department Chemistry, University Roorkee, Roorkee, 247 667, India
SOURCE: Indian Drugs (1994), 31(7), 317-20
CODEN: INDRBA; ISSN: 0019-462X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Twenty two heterocyclic compds. belonging to various heterocyclic ring systems containing nitrogen and/or sulfur have been screened for anti-amoebic
(E. histolytica) and anthelmintic (A. ceylanicum, N. dubius & H. nana) activity in vitro. Two compds. i.e. 2-imino-3-(2-methyl-6'-nitrophenyl)-4-phenyl-4-thiazoline and 3,3,10,10-tetramethyl-1,2-dithia-5,8-diazacyclodecane dihydrochloride showed in vitro anti-amoebic activity at 100 μg/mL and one compound i.e. 3-(o-amino phenyl)-2-imino-4-phenyl-4-thiazoline showed in vivo anthelmintic (A. ceylanicum) activity at 230 mg/kg p.o.
IT 75542-79-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-amoebic and anthelmintic evaluation of heterocyclic compds. containing nitrogen and/or sulfur)
RN 75542-79-9 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 3-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 49 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:237240 HCAPLUS
DOCUMENT NUMBER: 122:133121
TITLE: Synthesis, isomer identification by 2D-NMR and antiinflammatory evaluation of some 9H-imidazo[1,2-a]benzimidazole and perhydroimidazo[1,2-d][1,2,4]dithiazepine derivatives
AUTHOR(S): Sondhi, S. M.; Magan, Archana; Mahesh, V. K.; Srimal, R. C.; Goel, A. K.
CORPORATE SOURCE: Dep. Chem., Univ. Roorkee, Roorkee, 247 667, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1994), 33B(12), 1144-9
CODEN: IJSBDB; ISSN: 0376-4699
PUBLISHER: Publications & Information Directorate, CSIR
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

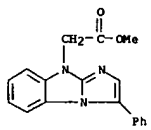


I



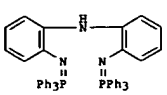
II

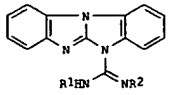
AB Condensation of 3-phenyl-1H-imidazo[1,2-a]benzimidazole derivs. and perhydro-1,1,4,4-tetramethylimidazo[1,2-d][1,2,4]dithiazepine with 2-bromopropanoates gave the corresponding esters I (R = H, Me, OMe) (and regioisomer) and imidazo[2,1-d][1,2,5]dithiazepineacetates II (R1 = H, Me; R2 = Me, Et). The antiinflammatory evaluation of I and II was carried out.
IT 161085-97-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of inflammation inhibitors imidazo[1,2-a]benzimidazoleacetates)
RN 161085-97-8 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-acetic acid, 3-phenyl-, methyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 49 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

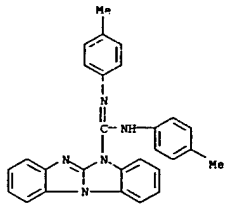
L4 ANSWER 50 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:63624 HCAPLUS
DOCUMENT NUMBER: 122:10006
TITLE: Synthetic applications of C,C-bis(iminophosphoranes): preparation of [5+5] rigid bicyclic guanidines and 1,3,6-benzothiadiazepino[3,2-a]benzimidazole derivatives
AUTHOR(S): Molina, Pedro; Lidon, M. Josefa; Tarraga, Alberto
CORPORATE SOURCE: Fac. Quim., Univ. de Murcia, Murcia, E-30071, Spain
SOURCE: Tetrahedron (1994), 50(33), 10029-36
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
GI


I


II

AB Za Wittig-type reaction of bis(iminophosphorane) I [i.e., bis[(phosphoranylidene)amino]diphenylamine], derived from bis(2-aminophenyl)amine with two equivalent of isocyanate directly provided benzimidazo[1,2-a]benzimidazole derivs. II [R1, R2 = (un)substituted Ph, etc.]. However, the reaction with one equivalent of isocyanate or carbon disulfide afforded C-aryl iminophosphoranes, derived from a 1-phenylbenzimidazole ring, which underwent cyclization by the action of one equivalent of isocyanate to give the [5+5] rigid bicyclic guanidines II or 1,3,6-benzothiadiazepino[3,2-a]benzimidazoles.
IT **159528-55-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 159528-55-9 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole-5-carboximidamide, N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

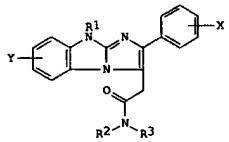
L4 ANSWER 50 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L4 ANSWER 51 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:557646 HCAPLUS
DOCUMENT NUMBER: 121:157646
TITLE: 9H-imidazo[1,2-a]benzimidazoles with GABA activity.
INVENTOR(S): George, Pascal; De Peretti, Danielle; Roy, Jocelyne; Schmitt, Jean-Paul; Sevrin, Mireille
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

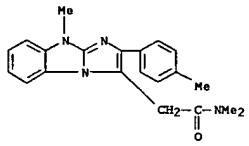
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 607076	A1	19940720	EP 1994-400057	19940111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
FR 2700544	A1	19940722	FR 1993-337	19930115
FR 2700544	B1	19950217		
FR 2707987	A1	19950127	FR 1993-9013	19930722
FR 2707987	B1	19950908		
CA 2113490	AA	19940716	CA 1994-2113490	19940114
FI 9400186	A	19940716	FI 1994-186	19940114
NO 9400130	A	19940718	NO 1994-130	19940114
ZA 9400291	A	19940817	ZA 1994-291	19940114
JP 06271575	A2	19940927	JP 1994-2463	19940114
CN 1097743	A	19950125	CN 1994-100607	19940114
AU 9453177	A1	19950525	AU 1994-53177	19940114
AU 665137	B2	19951214		
HU 70407	A2	19951030	HU 1994-109	19940114
US 5466706	A	19951114	US 1994-180998	19940114
PRIORITY APPLN. INFO.:			FR 1993-337 A	19930115
			FR 1993-9013 A	19930722

OTHER SOURCE(S): MARPAT 121:157646
GI


I

AB The title compds. [I; R1 = H, C1-3 alkyl, acetyl, PhCH2, etc.; R2, R3 = H C1-5 (un)branched (un)substituted alkyl, etc.; X = H, F, Cl, Br, C1-3 alkyl, CF3, etc.; Y = H, F, Cl, Br, C1-4 alkyl, CF3, CF3O, MeO], useful for the treatment of illnesses due to disorders in the transmission of GABA (no data), are prepared Thus, I (R1 = R2 = X = Y = H, R3 = Me), m.p. 316-321° (decomposition), was prepared
IT **157498-04-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

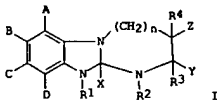
L4 ANSWER 51 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
(Reactant or reagent)
(prepn. and reaction of, in prepn. of imidazobenzimidazoles having GABA activity)
RN 157498-04-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-acetamide, N,N,9-trimethyl-2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

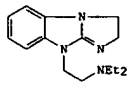


L4 ANSWER 52 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:245099 HCAPLUS
DOCUMENT NUMBER: 120:245099
TITLE: Benzimidazole derivatives and analogs with antidiabetic and platelet antiaggregant activity, and their preparation and pharmaceutical compositions
INVENTOR(S): Anisimova, Vera Alekseevna; Levchenko, Margarita Valentinovna; Korochina, Tatyana Borisovna; Spasov, Alexander Alexeyevich; Kovalev, Sergei Gennadyevich; Dudchenko, Galina Petrovna
PATENT ASSIGNEE(S): Adir et Cie., Fr.
SOURCE: Eur. Pat. Appl., 66 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 571253	A1	19931124	EP 1993-401239	19930514
EP 571253	B1	19981104		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
FR 2691462	A1	19931126	FR 1992-6036	19920519
FR 2691462	B1	19950609		
FR 2694293	A1	19940204	FR 1992-9488	19920731
FR 2694293	B1	19941007		
AT 172975	E	19981115	AT 1993-401239	19930514
ES 2126636	T3	19990401	ES 1993-401239	19930514
CA 2096475	AA	19931120	CA 1993-2096475	19930518
AU 9338608	A1	19931125	AU 1993-38608	19930518
AU 656466	B2	19950202		
JP 06087859	A2	19940329	JP 1993-151016	19930518
JP 2506263	B2	19960612		
US 5623073	A	19970422	US 1993-63531	19930518
ZA 9303509	A	19931210	ZA 1993-3509	19930519
US 5639756	A	19970617	US 1994-330903	19941028

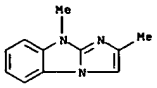
PRIORITY APPLN. INFO.: FR 1992-6036 A 19920519
FR 1992-9488 A 19920731
OTHER SOURCE(S): MARPAT 120:245099
GI


I


II

AB Members of claimed title compds. I [n = 0, 1; A, B, C, D = H, halo, alkyl, alkoxy, OH, CF3, hydroxyalkyl; Y, Z = H; or YZ = bond; XR1 or XR2 = bond,

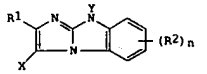
L4 ANSWER 52 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
and other group (R1 or R2) = (un)substituted aminoalkyl, aroylalkyl, arylhydroxyalkyl, phenylalkyl, naphthylalkyl; R3 = H, alkyl, (un)substituted Ph, naphthyl, heteroaryl; R4 = H, (un)substituted aminoalkyl, aminoalkoxycarbonyl, aroyl, heteroaroyl; with many addnl. dependencies and provisos] were prepd. in 71 synthetic examples, mostly as salts, with the corresponding specific free bases also claimed. For example, 2-amino-1-[2-(diethylamino)ethyl]benzimidazole underwent N-alkylation at the 3-position by ClCH2CH2OH (90% yield), and treatment of the resulting alc. with SOCl2 gave the chloroethyl imine 1-[2-(diethylamino)ethyl]-2-imino-3-(2-chloroethyl)benzimidazole-2HCl (100%). Cyclization of the latter as the free base in xylene (92%) gave title compd. II, isolated as the di-HCl salt. Tests in rats showed I to have hypoglycemic activity comparable to gliclazide, lasting more than 12 h. I showed ID50 of < 10-4 M for inhibition of ADP-induced aggregation of rabbit platelets in vitro, but showed no significant antihypertensive effects in rats. Acute oral toxicity in mice was also said to be very low.
IT 28992-71-4, 2,9-Dimethylimidazo[1,2-a]benzimidazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-acylation of, in preparation of imidazobenzimidazole antidiabetics)
RN 28992-71-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2,9-dimethyl- (8CI, 9CI) (CA INDEX NAME)



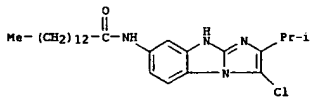
L4 ANSWER 53 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:549427 HCAPLUS
DOCUMENT NUMBER: 119:149427
TITLE: Benzimidazolinoimidazole compounds as photographic couplers
INVENTOR(S): Ikesu, Satoru; Kita, Hiroshi; Kaneko, Yutaka
PATENT ASSIGNEE(S): Konishiroku Photo Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05107705	A2	19930430	JP 1991-296544	19911017

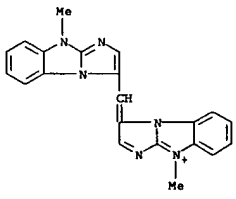
PRIORITY APPLN. INFO.: JP 1991-296544 19911017
GI


I

AB Claimed are photog. couplers represented by I. For I, R1, R2, Y = H or substituent; n = 0 to 4; X = H or group to be released upon reaction with an oxidized color developing agent. The use of the title magenta couplers in photog. materials gives stable images.
IT 149815-19-0
RL: USES (Uses)
(magenta coupler, for photog. material)
RN 149815-19-0 HCAPLUS
CN Tetradecanamide, N-[3-chloro-2-(1-methylethyl)-1H-imidazo[1,2-a]benzimidazol-7-yl]- (9CI) (CA INDEX NAME)

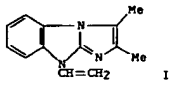


L4 ANSWER 54 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:224482 HCAPLUS
DOCUMENT NUMBER: 118:224482
TITLE: Spectrochemical characteristics of symmetrical monomethinecyanines based on pyrrolo- and imidazo[1,2-a]benzimidazole
AUTHOR(S): Chernovyants, M. S.; Askalepova, O. I.; Anisimova, V. A.; Bagdasarov, K. N.
CORPORATE SOURCE: Rostov. Univ., Rostov, Russia
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1992), 58(3), 257-61
CODEN: UKZHAU; ISSN: 0041-6045
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The electron d. of ground and 1st excited states of the title dyes were calculated The nature of the long-wavelength absorption maximum was determined and
substituent effects on its position and intensity were examined Exptl. data were tabulated with respect to the possible use of these dyes as reagents for extraction-spectrophotometric determination of Au and Tl. They include absorption
maximum and molar absorptivity of the dyes and their tetrachloroaurate and tetrachlorothallate counterparts, hydration and protonation pK of the dyes, and stability consts. of the tetrachloroaurate and tetrachlorothallate counterparts.
IT 92587-15-0
RL: ANST (Analytical study)
(electronic structure and molar absorptivity of)
RN 92587-15-0 HCAPLUS
CN 3H-Imidazo[1,2-a]benzimidazolium, 9-methyl-3-[(9-methyl-9H-imidazo[1,2-a]benzimidazol-3-yl)methylene]-, iodide (9CI) (CA INDEX NAME)



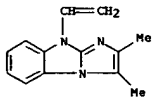
● I⁻

L4 ANSWER 55 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:571314 HCAPLUS
DOCUMENT NUMBER: 117:171314
TITLE: 2-Aminobenzimidazole in reaction with acetylene
AUTHOR(S): Baikalova, L. V.; Domnina, E. S.; Afonin, A. V.
CORPORATE SOURCE: Sib. Dep., Inst. Org. Chem., Irkutsk, 664033, Russia
SOURCE: Izvestiya Akademii Nauk, Seriya Khimicheskaya (1992), (3), 749-51
CODEN: IASKEA; ISSN: 0002-3353
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

AB The title reaction under pressure gave, depending on the reaction conditions, 1-vinyl-2-amino- or 1,3-divinyl-2-iminobenzimidazole. In aqueous dioxane, 1,3-divinylbenzimidazol-2-one was isolated along with the monovinyl derivative of the title compound Cyclization of the divinylic derivative of the title imidazole with acetylene gave 9-vinyl-1,2-dimethylimidazo[1,2-a]benzimidazole (I).
IT **139294-60-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 139294-60-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethenyl-2,3-dimethyl- (9CI) (CA INDEX NAME)

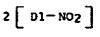


L4 ANSWER 56 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:206845 HCAPLUS
DOCUMENT NUMBER: 116:206845
TITLE: Solvent extraction-photometric determination of thallium(III) by using cyanine dyes of pyrrolo- and imidazo[1,2-a]benzimidazole type
AUTHOR(S): Chernov'yants, M. S.; Askalepova, O. I.; Anisimova, V. A.; Bagdasarov, K. N.; Evlashenkova, I. V.
CORPORATE SOURCE: Rostov-on-Don State Univ., Rostov-on-Don, USSR
SOURCE: Zhurnal Analiticheskoi Khimii (1991), 46(11), 2214-17
CODEN: ZAKHA8; ISSN: 0044-4502
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Conditions were studied for the formation and solvent extraction of ion pairs of tetrachlorothallate(III) with sym. monomethinecyanine dyes based on pyrrolo- and imidazo[1,2-a]benzimidazole. A highly selective and sensitive extraction-photometric method was developed for the determination of thallium(III). It was used for determining Tl in Mg alloy and rainwater samples.
IT **139642-34-5**
RL: ANST (Analytical study)
(formation constant and molar absorptivity of)
RN 139642-34-5 HCAPLUS
CN 3H-Imidazo[1,2-a]benzimidazolium, 9-methyl-3-[[9-methyl-2-(nitrophenyl)-9H-imidazo[1,2-a]benzimidazol-3-yl]methylene]-2-(nitrophenyl)-, (T-4)-tetrachlorothallate(1-) (9CI) (CA INDEX NAME)

CM 1

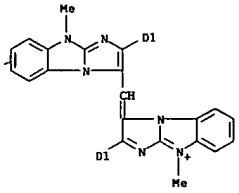
CRN 139642-33-4
CMF C33 H23 N8 O4
CCI IDS

PAGE 1-A



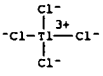
L4 ANSWER 56 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 2-A

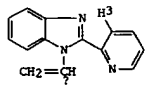


CM 2

CRN 18616-42-7
CMF Cl4 Tl
CCI CCS

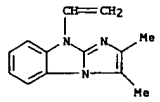


L4 ANSWER 57 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:105525 HCAPLUS
DOCUMENT NUMBER: 116:105525
TITLE: Intramolecular specific C-H...N interactions with participation of a nitrogen atom of a pyridine ring, amino, and imino groups in 2-substituted 1-vinylbenzimidazoles according to proton and carbon-13 NMR data
AUTHOR(S): Afonin, A. V.; Baikalova, L. V.; Domnina, E. S.
CORPORATE SOURCE: Irk. Inst. Org. Khim., Irkutsk, USSR
SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1991), (12), 2786-91
CODEN: IASKA6; ISSN: 0002-3353
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

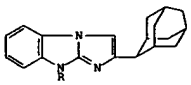
AB The double intramol. specific C-H...N interaction in pyridylvinylbenzimidazole (I) exists between α-H of vinyl group and H3 atom of pyridine ring and nitrogen atoms of pyridine and benzimidazole rings, resp. No intramol. interaction were observed between hydrogen atoms of vinyl group and nitrogen of amino group in 1-vinyl-2-aminobenzimidazole. The specific interaction of N atom of imino group and β-cis hydrogen of vinyl group in 1,3-divinyl-2-iminobenzimidazole is considerably weakened by degenerate tautomeric equilibrium
IT **139294-60-3**
RL: PRP (Properties)
(NMR of, intramol. specific carbon-hydrogen-nitrogen interaction in relation to)
RN 139294-60-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethenyl-2,3-dimethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 58 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:464767 HCAPLUS
DOCUMENT NUMBER: 115:64767
TITLE: Dihydrochlorides of 9-substituted 2-(1-adamantyl)imidazo[1,2-a]benzimidazoles displaying immunodepressing activity
INVENTOR(S): Avdyunina, N. I.; Anisimova, V. A.; Astakhova, L. I.; Klimova, N. V.; Kovalev, I. E.; Pyatin, B. M.; Shipulina, N. V.
PATENT ASSIGNEE(S): Scientific-Research Institute of Pharmacology, Academy of Medical Sciences, U.S.S.R., USSR; Scientific-Research Institute of Biological Testing of Chemical Compounds; Rostov State University
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1990, (42), 257. CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1143039	A1	19901115	SU 1983-3669438	19831206
PRIORITY APPLN. INFO.:			SU 1983-3669438	19831206

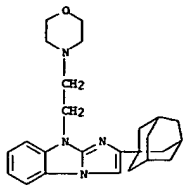
OTHER SOURCE(S): CASREACT 115:64767
GI



I

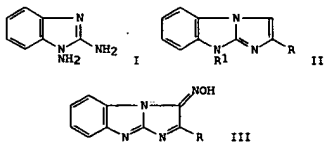
AB The title compds. I (R = Et2NCH2CH2, 2-morpholinoethyl) have immunodepressive action.
IT **129625-57-6**
RL: BIOL (Biological study)
(as immunodepressant)
RN 129625-57-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-[2-(4-morpholinyl)ethyl]-2-tricyclo[3.3.1.13,7]dec-1-yl-, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 58 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

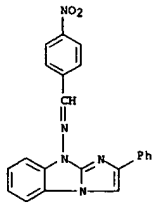


•2 HCl

L4 ANSWER 59 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:207126 HCAPLUS
DOCUMENT NUMBER: 114:207126
TITLE: Synthesis of 9-aminoimidazo[1,2-a]benzimidazoles and their deamination
AUTHOR(S): Kuz'menko, T. A.; Kuz'menko, V. V.; Pozharskii, A. F.; Anisimova, V. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, 344104, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1990), (11), 1517-23
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 114:207126
GI



AB The reaction of diaminobenzimidazole I with XCH2COR (X = Cl, Br; R = Me, CMe3, Ph, p-MeOC6H4) gives benzimidazoles II (R1 = NH2). II (R1 = NH2) can be easily deaminated by KOH in MeSOMe to give II (R1 = H). The reaction of II (R1 = H) with HNO2 gives nitroso derivs. III, which were shown to exist predominantly as hydroxyimino tautomers.
IT **133638-50-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deamination of)
RN 133638-50-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazol-9-amine, N-[(4-nitrophenyl)methylene]-2-phenyl- (9CI) (CA INDEX NAME)



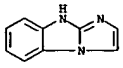
L4 ANSWER 59 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 60 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:156579 HCAPLUS
DOCUMENT NUMBER: 114:156579
TITLE: Effects of imidazo[1,2-a]benzimidazole derivatives on gastric secretion and the antiulcer action
AUTHOR(S): Spasov, A. A.; Kovalev, G. V.; Bakunov, P. A.; Reshetov, M. E.; Anisimova, V. A.; Avdyunina, N. I.
CORPORATE SOURCE: Dep. Pharmacol., Med. Inst., Volgograd, 400066, USSR
SOURCE: Farmakologiya i Toksikologiya (Moscow) (1990), 53(4), 30-3
CODEN: FATOAO; ISSN: 0014-8318
DOCUMENT TYPE: Journal
LANGUAGE: Russian

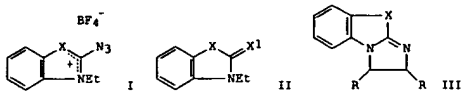
AB Expts. on rats showed that of 16 studied imidazo [1,2-a] benzimidazole derivs. only the compds. with Ph at C-2 and a N-containing radical at N-9 inhibit gastric acid secretion. The binding of a methoxy group to Ph, replacement by its adamantyl, displacement of the N-containing substituent to N-1 or its substitution were found to decrease or stop the inhibiting action of these substances on gastric parietal cells. Dihydrochloride of 2-phenyl-9(β-diethylaminoethyl)imidazo[1,2-a]benzimidazole was more potent than cimetidine and omeprazole in inhibiting gastric acid secretion and pepsin output, and in exerting an antiulcer action.

IT **247-79-0D**, 1H-Imidazo[1,2-a]benzimidazole, derivs.
RL: BIOL (Biological study)
(antisecretory and antiulcer activity of, structure in relation to)

RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



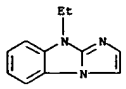
L4 ANSWER 61 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:42629 HCAPLUS
DOCUMENT NUMBER: 114:42629
TITLE: Azidinium salts. 24. Thermolysis of heterocyclic azidinium tetrafluoroborates
AUTHOR(S): Huys-Francotte, Martine; Balli, Heinz
CORPORATE SOURCE: Inst. Farbenchem., Univ. Basel, Basel, CH-4056, Switz.
SOURCE: Helvetica Chimica Acta (1990), 73(6), 1679-84
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: German
GI



AB Thermolysis of heterocyclic azidinium salts was examined, and reaction mechanisms were discussed. E.g., azidiobenzimidazolium tetrafluoroborate I (X = NEt) underwent thermolysis to give hydrolysis product II (X1 = O), imine II (X1 = NH), and III (RR = double bond; R = H). Azidobenzothiazolium tetrafluoroborate I (X = S) underwent thermolysis to give III (X = S, RR = double bond), imine II (X = S, X1 = NH), and hydrolysis product II (X = S, X1 = O). Products were isolated by GC/MS.

IT **131537-30-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 131537-30-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethyl- (9CI) (CA INDEX NAME)

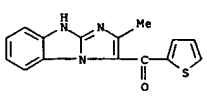


L4 ANSWER 62 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:31822 HCAPLUS
DOCUMENT NUMBER: 114:31822
TITLE: Inhibition of steady-state dissolution of nickel-zinc alloys
AUTHOR(S): Ekilik, V. V.; Fevraleva, V. A.; Berezhnaya, A. G.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Zashchita Metallov (1990), 26(5), 842-6
CODEN: ZAMEA9; ISSN: 0044-1856
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The inhibitor effects were compared in the selective and nonselective dissoln. of Ni, Zn, and Zn-Ni alloys (with 50, 58, 72, 96 mol% Ni) in aqueous solns. of 1M LiCl + 0.01M HCl, with some organic inhibitors. Steady-state anodic polarization curves and partial dissoln. curves of the above metals and alloys were plotted. Besides Ph(CH2)COOH, the inhibitors of the type: 5-substituted-2-methylpyrimidine; (I); R2TeI2; bis(2-aminophenyl)ditelluride; 2,6-disubstituted pyranium perchlorate, and (II) were tested, where the substituents (R) are not defined. The dissoln. of Zn and the alloys in the absence of inhibitors is determined by the kinetics of Ni dissoln., which corresponds to the basic principles of steady-state dissoln. of the binary alloys. The ratio of the partial dissoln. rates of the components without an inhibitor has a substantial effect. The action of surfactants on the anodic dissoln. of Zn is not the determining factor of their influence on the ionization of Zn from the alloys. Thus, inhibition of Zn dissoln. from alloys is observed in the presence of surfactants which stimulate the dissoln. of pure Zn (R2TeI2, where R is not defined) and bis(2-aminophenylditelluride). The dependence is shown of the formation constant on the nature of the inhibitor and the composition of the alloy (E° = 0.0 V). During the transition from the cationic-mol. additive II to the mol. additive R2TeI2 and the anionic-mol. additive Ph(CH2)COOH, a reversal in the sign of β is observed. The sensitivity of the protective action of additives R2TeI2 and II to a change in the potential increases upon decreasing [Ni]0 in the alloy. In the case of the anionic-mol. additive, β is practically independent of the alloy composition

IT **127323-72-2D**, derivs
RL: USES (Uses)
(corrosion inhibitors, for nickel-zinc alloys in acid chloride solns.)

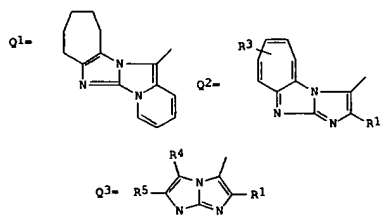
RN 127323-72-2 HCAPLUS
CN Methanone, (2-methyl-1H-imidazo[1,2-a]benzimidazol-3-yl)-2-thienyl- (9CI) (CA INDEX NAME)



L4 ANSWER 63 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:611977 HCAPLUS
DOCUMENT NUMBER: 113:211977
TITLE: Preparation of acylthioimidazoimidazoles and analogs as antiulcer agents
INVENTOR(S): Tomiyama, Tsuyoshi; Tomiyama, Akira; Shirai, Tadashi; Wakabayashi, Shuuichi; Kawai, Tomoyuki; Ueyama, Naoto; Sonegawa, Motoharu
PATENT ASSIGNEE(S): Kotobuki Seiyaku Co., Ltd., Japan
SOURCE: Ger. Offen., 19 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

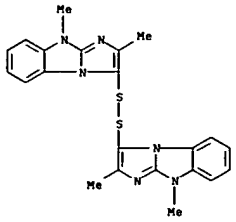
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 3943180	A1	19900705	DE 1989-3943180		19891228
JP 02256675	A2	19901017	JP 1989-313880		19891201
US 5008282	A	19910416	US 1989-450264		19891213
GB 2226559	A1	19900704	GB 1989-28872		19891221
GB 2226559	B2	19921014			
FR 2640975	A1	19900629	FR 1989-17334		19891228
US 5240944	A	19930831	US 1991-665662		19910307
PRIORITY APPLN. INFO.:			JP 1988-332550	A	19881228
			US 1989-450264	A3	19891213

OTHER SOURCE(S): MARPAT 113:211977
GI

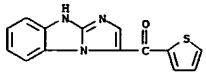


AB ASR [A = imidazoimidazolyl groups Q1-Q3; R = alkenyl, alkynyl, alkanoyl, alkoxycarbonyl, (un)substituted alkyl, etc.; R1 = alkyl, (un)substituted Ph; R2 = alkyl; R3 = H, alkyl; R4, R5 = H; R4R5 = CH:CHCH:CH] were prepared Thus, 2-chloro-1,4,5,6,7,8-hexahydrocycloheptimidazole (preparation given) was condensed with 2-picolyl chloride and the product heated 17 h at 80° with ethanolic HCl to give Q1H which was stirred overnight with S2Cl2 to give (Q1S)2. The latter was stirred 5 min with NaBH4 in THF/MeOH after which Q1SCH2CN. Q2SCOR6 (R1 = Me, R3 = H, R6 = 2-pyridyl) gave 83.7% inhibition of histamine-induced gastric acid secretion in rats at 50 mg/kg orally. A granulate and tablet formulation comprising the title compds. are given.

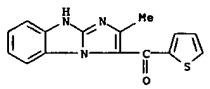
L4 ANSWER 63 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
IT **130477-71-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of antiulcer agents)
RN 130477-71-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 3,3'-dithiobis[2,9-dimethyl- (9CI) (CA INDEX NAME)



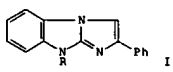
L4 ANSWER 64 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:522547 HCAPLUS
DOCUMENT NUMBER: 113:122547
TITLE: Inhibition of nonsteady-state dissolution of nickel-zinc alloys
AUTHOR(S): Ekilik, V. V.; Berezhnaya, A. G.; Fevraleva, V. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Zashchita Metallov (1990), 26(3), 367-75
CODEN: ZAMEA9; ISSN: 0044-1856
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The selective dissoln. of Zn6Ni, Zn50Ni, Zn58Ni, Zn72Ni and Zn96Ni was studied in aqueous LiCl + HCl solns. by electrochem. methods. The selectivity
and diffusion coeffs. of Zn and effective thicknesses of the interdiffusion zone and periods of selective dissoln. were estimated The effect of inhibitors on the dissoln. characteristics was studied.
IT **128945-76-6D**, derivs.
RL: PRP (Properties)
(corrosion inhibitor, for nickel-zinc alloys)
RN 128945-76-6 HCAPLUS
CN Methanone, 1H-imidazo[1,2-a]benzimidazol-3-yl-2-thienyl- (9CI) (CA INDEX NAME)



L4 ANSWER 65 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:242084 HCAPLUS
DOCUMENT NUMBER: 112:242084
TITLE: Influence of surfactants and the composition of a nickel-zinc alloy on its dissolution in perchlorate media
AUTHOR(S): Ekilik, V. V.; Berezhnaya, A. G.; Fevraleva, V. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Elektrokhimiya (1990), 26(3), 288-93
CODEN: ELKKAX; ISSN: 0424-8570
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The selective and uniform dissoln. of Ni-Zn alloys (with Ni contents of 6, 50, 58 and 72 atomic%) was studied in aqueous ClO4- solns. over a wide region of
potentials. The coeffs. of selectivity and diffusion of Zn, periods of the selective dissoln., and effective thicknesses of zones of interdiffusion of the alloy components were estimated The effect of surfactants on the alloy dissoln. was examined
IT **127323-72-2D**, derivs.
RL: PRP (Properties)
(surfactant, anodic dissoln. in passivation of nickel-zinc alloys in relation to)
RN 127323-72-2 HCAPLUS
CN Methanone, (2-methyl-1H-imidazo[1,2-a]benzimidazol-3-yl)-2-thienyl- (9CI) (CA INDEX NAME)

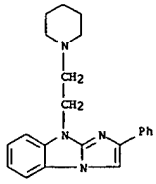


L4 ANSWER 66 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:210542 HCAPLUS
DOCUMENT NUMBER: 112:210542
TITLE: Effects of condensed derivatives of benzimidazole on gastric secretion
AUTHOR(S): Kovalev, G. V.; Spasov, A. A.; Bakumov, P. A.; Reshetov, M. E.; Anisimova, V. A.; Kuz'menko, T. A.; Strokin, Yu. V.; Dianov, V. M.
CORPORATE SOURCE: Volgograd. Med. Inst., Volgograd, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1990), 24(2), 127-30
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

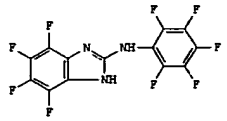
AB The secretion of stomach juice and its content of HCl and pepsin was studied in rats subjected to a 7-h pylorus ligation and treatments with derivs. of benzimidazole and condensed benzimidazoles with a common N atom such as thiazolo[2,3-a]benzimidazoles, triazeno[2,3-a]benzimidazoles, pyrazolo[1,5-a]benzimidazoles, triazolo[1,5-a]benzimidazoles, and imidazo[1,2-a]benzimidazoles. The most marked inhibitory effect on the parietal cells of the stomach was produced by 9-dialkylaminoalkyl-2-phenylimidazo[1,2-a]benzimidazoles (I, R = CH2CH2NEt2, morpholinoethyl, piperidinoethyl). The activity of I was more potent than cimetidine and comparable to omeprazole.
IT **23572-33-0**
RL: BIOL (Biological study)
(stomach secretion inhibition by, antiulcer effects and structure in relation to)
RN 23572-33-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-[2-(1-piperidinyl)ethyl]- (9CI) (CA INDEX NAME)



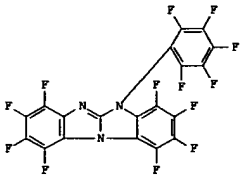
L4 ANSWER 66 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 67 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:178787 HCAPLUS
DOCUMENT NUMBER: 112:178787
TITLE: Reaction of N-pentafluorophenylcarbonimidoyl dichloride with primary amines
AUTHOR(S): Kolesnikova, I. V.; Petrova, T. D.; Platonov, V. E.; Ryabicheva, T. G.; Mikhailov, V. A.; Popov, A. A.; Savelova, V. A.
CORPORATE SOURCE: Novosib. Inst. Org. Khim., Novosibirsk, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1989), 25(8), 1689-95
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 112:178787
GI



II



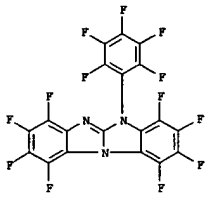
III

AB Treating C6F5N:CCl2 (I) with RNH2 (R = Bu, Me3C, Ph, C6F5) in MeCN gave C6F5N:C:NR and C6F5N:C(NHR)2. Treating I with o-H2NC6H4NH2 gave benzimidazole II. Treating C6F5N:C(NHC6F5)2 with K2CO3 in DMF gave 64% benzimidazobenzimidazole III.

IT **120672-74-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 120672-74-4 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole, 1,2,3,4,7,8,9,10-octafluoro-5-(pentafluorophenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 67 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L4 ANSWER 68 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:406852 HCAPLUS
DOCUMENT NUMBER: 111:6852
TITLE: Reactions of N-polyfluorophenylcarbonimidoyl dichlorides with primary and secondary amines. Kinetics and mechanism. Synthesis of polyfluorinated carbodiimides, chloroformamidines, guanidines and benzimidazoles
AUTHOR(S): Kolesnikova, I. V.; Petrova, T. D.; Platonov, V. E.; Mikhailov, V. A.; Popov, A. A.; Savelova, V. A.
CORPORATE SOURCE: Inst. Org. Chem., Novosibirsk, 630090, USSR
SOURCE: Journal of Fluorine Chemistry (1988), 40(2-3), 217-46
CODEN: JFLCAR; ISSN: 0022-1139
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:6852
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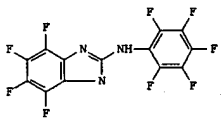
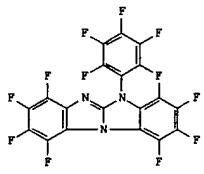


II

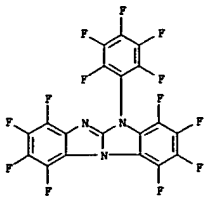


III

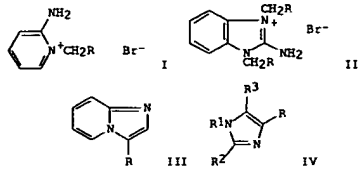
AB The reactions of N-(polyfluorophenyl)carbonimidoyl dichlorides, e.g., C6F5N:CCl2 (I), with primary aliphatic amines led to carbodiimides or guanidines, depending on the amount of amine. The carbodiimides reacted with amines to form guanidines. The reactions with primary aromatic amines produced only triarylguanidines. I reacted with tetrafluoro-o-phenylenediamine to give tetrafluorobenzimidazole derivative II. Polyfluorinated benzimidazoles were also produced by the thermolysis of polyfluorinated triarylguanidines. Heating N1,N2,N3-tris(pentafluorophenyl)guanidine with K2CO3 in DMF gave benzimidazo[1,2-a]benzimidazole derivative III. N-(Polyfluorophenyl)carbonimidoyl dichlorides reacted with various secondary amines at room temperature giving N-(polyfluorophenyl)chloroformamidines in high yields. Elevated temperature and prolonged reaction time led to N-(polyfluorophenyl)guanidines. The reaction proceed by a bimol. nucleophilic addition-elimination mechanism via a tetrahedral intermediate.

IT **120672-74-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)

L4 ANSWER 68 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
(prepn. of)
RN 120672-74-4 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole, 1,2,3,4,7,8,9,10-octafluoro-5-(pentafluorophenyl)- (9CI) (CA INDEX NAME)

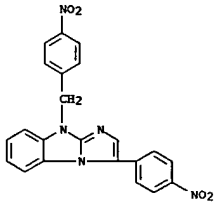


L4 ANSWER 69 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:135145 HCAPLUS
DOCUMENT NUMBER: 110:135145
TITLE: Synthesis of imidazoles by reaction of N-benzylated amidines with carboxylic acid derivatives
AUTHOR(S): Liebscher, Juergen; Feist, Kersten
CORPORATE SOURCE: Sekt. Chem., Humboldt Univ., Berlin, Ger. Dem. Rep.
SOURCE: Journal fuer Praktische Chemie (Leipzig) (1988), 330(2), 175-81
CODEN: JPCEAO; ISSN: 0021-8383
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:135145
GI

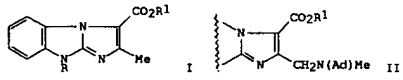


AB 2-Amino-N-heterocycles, such as 2-aminopyridine or 2-aminobenzimidazole derivs I and II (R = 4-O2NC6H4), as well as benzamidines R1N:CR2NHCH2R (R1 = Ph, 4-MeOC6H4; R2 = Ph, 4-ClC6H4), all possessing a N-(4-nitrobenzyl)-substituent react as N-C-N-C synthons with formamide chlorides, formamide acetals, Ac2O with formation of imidazole compds., e.g. III and IV (R3 = H, Me). In some cases, intermediate N-acetylation or N-formylation products are isolated.
IT **119690-44-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 119690-44-7 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 3-(4-nitrophenyl)-9-[(4-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)

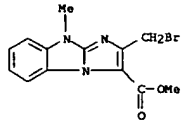
L4 ANSWER 69 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



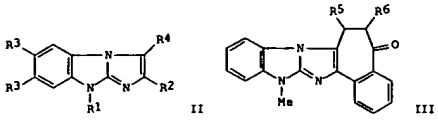
L4 ANSWER 70 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:114752 HCAPLUS
DOCUMENT NUMBER: 110:114752
TITLE: Synthesis and neuropsychotropic activity of imidazo[1,2-a]benzimidazole adamantyl substituents
AUTHOR(S): Morozov, I. S.; Anisimova, V. A.; Avdyunina, N. I.; Lukova, O. A.; Pyatin, B. M.; Militareva, N. A.; Bykov, N. P.; Dvalishvili, E. G.; Khranilov, A. A.
CORPORATE SOURCE: NII Farmakol., Moscow, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1988), 22(7), 815-19
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 110:114752
GI



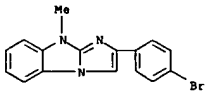
AB Benzimidazolyladamantane derivs. I (R = Me, R1 = Me, Et; R = Bu, R1 = Me, Ad = 1-adamantyl) were prepared in 3 steps from benzimidazolium bromides II via cyclization, bromination, and amination by adamantylmethylamine. The hydrochlorides of I inhibited the onset of catalepsy in mice by 88.4, 110.2 and 108.2% at 5 mg/kg dosage.
IT **119294-91-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and amination by adamantylmethylamine)
RN 119294-91-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 2-(bromomethyl)-9-methyl-, methyl ester (9CI) (CA INDEX NAME)



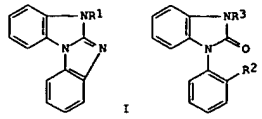
L4 ANSWER 71 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:422898 HCAPLUS
DOCUMENT NUMBER: 109:22898
TITLE: Imidazo[1,2-a]benzimidazole derivatives. 25. Reaction of 2,9-disubstituted imidazo[1,2-a]benzimidazoles with acrylic acids and their derivatives
AUTHOR(S): Anisimova, V. A.; Korochina, T. B.; Zhurkina, L. I.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, 344090, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1987), (11), 1496-502
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 109:22898
GI



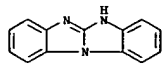
AB CH2:CHR (I; R = COCl, CO2H, CO2Me, cyano, CONH2) add to benzimidazoles II (R1 = alkyl, CH2Ph; R2 = Me, aryl, 2-furyl, 2-thienyl; R3 = H, Me; R4 = H) to afford propionic acid derivs. II (same R1-R3; R4 = CH2CH2R). Optimim yields are obtained in polyphosphoric acid. The reactivity of I decreases in the order stated. R5CH:CR6CO2H (R5 = H, R6 = Me; R5 = Ph, R6 = H) react with II (R1 = Me, R2 = Ph, R3 = R4 = H) to afford the corresponding propionic acids and also tetracyclic compds. III.
IT 21431-83-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with acrylic acid)
RN 21431-83-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-(4-bromophenyl)-9-methyl- (9CI) (CA INDEX NAME)



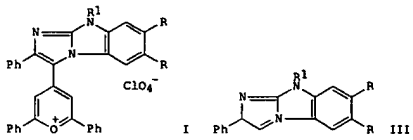
L4 ANSWER 72 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:131678 HCAPLUS
DOCUMENT NUMBER: 108:131678
TITLE: Synthesis of benzimidazo[1,2-a]benzimidazoles from 1,5-benzodiazepin-2-ones
AUTHOR(S): Achour, Reddouane; Zniber, Rachid
CORPORATE SOURCE: Dep. Chim., Fac. Sci., Rabat, Morocco
SOURCE: Bulletin des Societes Chimiques Belges (1987), 96(10), 787-92
CODEN: BSCBAG; ISSN: 0037-9646
DOCUMENT TYPE: Journal
LANGUAGE: French
OTHER SOURCE(S): CASREACT 108:131678
GI



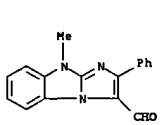
AB Benzimidazobenzimidazoles I (R1 = H, CHMe2) were prepared from benzimidazolinone derivative II (R2 = NO2, R3 = CHMe2)(III). III was hydrogenated to II (R2 = NH2, R3 = CHMe2), and the latter was heated to give I (R1 = CHMe2). I (R1 = H) was prepared from III via II (R2 = NH2, R3 = H); the latter was obtained from III and SnCl2-HCl.
IT 28890-99-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 28890-99-5 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



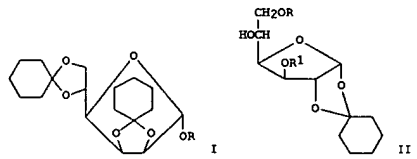
L4 ANSWER 73 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:55964 HCAPLUS
DOCUMENT NUMBER: 108:55964
TITLE: Reactions of heterocyclic cations with N-containing nucleophiles. 17. Synthesis of pyrylium salts containing tricyclic azole substituents
AUTHOR(S): Zhdanov, Yu. A.; Zvezdina, E. A.; Statsenko, S. M.; Anisimova, V. A.; Maksimova, A. N.; Korsun, V. V.
CORPORATE SOURCE: Inst. Fiz. Org. Khim., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1987), (3), 309-13
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 108:55964
GI



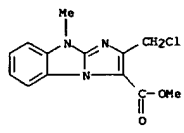
AB Intensely colored 4-azolylpyridylium perchlorates, e.g., I (R = H, R1 = Me, Me2CH; R = Me, Et) were prepared by hetarylation of 2,6-diphenylpyrylium perchlorate (II) with imidazo- and pyrrolo[1,2-a]benzimidazoles. Thus, refluxing II with condensed benzimidazole III (R = Me, R1 = Et) in DMF 40 min gave 96% I.
IT 28992-76-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with acetophenone)
RN 28992-76-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxaldehyde, 9-methyl-2-phenyl- (8CI, 9CI) (CA INDEX NAME)



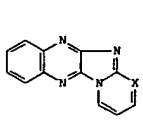
L4 ANSWER 74 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:590752 HCAPLUS
DOCUMENT NUMBER: 107:190752
TITLE: O-Heterocycle-substituted carbohydrates and their neurotropic activity
AUTHOR(S): Karkishchenko, N. N.; Alekseeva, V. G.; Anisimova, V. A.; Korol, E. L.; Vilkov, G. A.; Barchan, I. A.; Buchnaya, T. A.; Alekseev, Yu. E.; Zhdanov, Yu. A.
CORPORATE SOURCE: Inst. Fiz. Org. Khim., Rostov, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1987), 21(4), 408-13
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

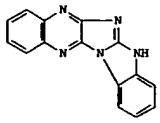


AB O-Heterocycle-substituted monosaccharides (e.g. I, R = substituted pyridinyl, quinolinyl or imidazo[1,2-a]benzimidazolyl) were prepared by the alkylation of OH groups in monosaccharides with chloromethyl heterocyclic derivs. under phase-transfer catalysis conditions (tributylbenzylammonium chloride). I (R = 2-quinolinylmethyl) and II (R = 2-pyridinylmethyl, R1 = Me) showed neurotropic activity close to that of aminazine. Other compds. showed lower activity and the remaining did not show activity.
IT 110989-99-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cyclohexylidene glucofuranose derivs.)
RN 110989-99-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 2-(chloromethyl)-9-methyl-, methyl ester (9CI) (CA INDEX NAME)

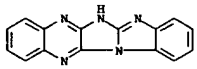


L4 ANSWER 75 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:477755 HCAPLUS
DOCUMENT NUMBER: 107:77755
TITLE: A one-step synthesis of heterocyclic imidazo[4,5-b]quinoxalines
AUTHOR(S): Tagdiwala, P. V.; Rangnekar, D. W.
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Bombay, Bombay, 400 019, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1986), 25B(10), 1057-8
CODEN: IJSBDB; ISSN: 0376-4699
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:77755
GI

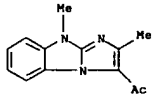

I


II

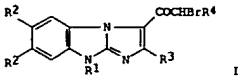
AB Synthesis of the title imidazoquinoxalines I (X = CH, N) and II has been achieved by the fusion of 2-aminopyridine, 2-aminopyrimidine, and 2-aminobenzimidazole with 2,3-dichloroquinoxaline in the presence of AcONa. The fluorescent properties of these compds. have been studied.
IT **81106-70-9P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and fluorescence spectrum of)
RN 81106-70-9 HCAPLUS
CN 5H-Benzimidazo[1',2':1,2]imidazo[4,5-b]quinoxaline (9CI) (CA INDEX NAME)

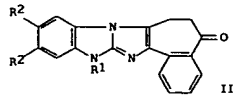


L4 ANSWER 76 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



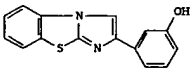
L4 ANSWER 76 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:156344 HCAPLUS
DOCUMENT NUMBER: 106:156344
TITLE: Studies on imidazo[1,2-a]benzimidazole derivatives. 21. Synthesis of halo ketones of imidazo[1,2-a]benzimidazole series
AUTHOR(S): Anisimova, V. A.; Korochina, T. B.; Avdyunina, N. I.; Simonov, A. M.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov. Gos. Univ., Rostov-on-Don, 344090, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1986), (3), 339-45
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 106:156344
GI


I

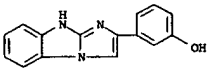

II

AB α-Bromo ketones I (R1 = Me, PhCH2, Et, Bu; R2 = H, Me; R3 = Ph, Me; R4 = H, Me) were prepared either by bromination of 3-acylimidazo[1,2-a]benzimidazole by Br-AcOH, or by acylation of imidazo[1,2-a]benzimidazoles, unsubstituted in the 3 position, with α-bromoalkanoyl halides. Treating 2-phenylimidazo[1,2-a]benzimidazoles with BrCH2CH2CO2H in polyphosphoric acid gave derivs. of benzocyclohepten[5',6':4,5]imidazo[1,2-a]benzimidazole II (R1 = Me, Et, Pr, Bu; R2 = H; R1 = Et, R2 = Me).
IT **40783-90-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and bromination of)
RN 40783-90-2 HCAPLUS
CN Ethanone, 1-(2,9-dimethyl-9H-imidazo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

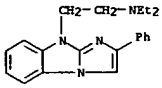
L4 ANSWER 77 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:109547 HCAPLUS
DOCUMENT NUMBER: 104:109547
TITLE: Imidazo[2,1-b]benzothiazoles. 2. New immunosuppressive agents
AUTHOR(S): Mase, Toshiyasu; Arima, Hideki; Tomioka, Kenichi; Yamada, Toshimitsu; Murase, Kiyoshi
CORPORATE SOURCE: Cent. Res. Lab., Yamanouchi Pharm. Co. Ltd., Tokyo, 174, Japan
SOURCE: Journal of Medicinal Chemistry (1986), 29(3), 386-94
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:109547
GI


I

AB 2-Phenylimidazo[2,1-b]benzothiazole derivs. and analogs were prepared and tested for immunol. activity. Some of the compds. showed significant suppressive activity of delayed type hypersensitivity without inhibition of humoral immunity in mice by oral administration. The most active compound was the hydroxyphenyl derivative I.
IT **99583-00-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and immunosuppressant activity of)
RN 99583-00-3 HCAPLUS
CN Phenol, 3-(1H-imidazo[1,2-a]benzimidazol-2-yl)- (9CI) (CA INDEX NAME)

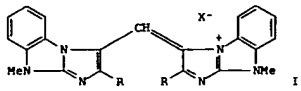


L4 ANSWER 78 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1985:541887 HCAPLUS
DOCUMENT NUMBER: 103:141887
TITLE: Studies of imidazo[1,2a]benzimidazole derivatives. XX. Synthesis and pharmacological activity of α,β-unsaturated ketones of imidazo[1,2-a]benzimidazole
AUTHOR(S): Zhdanov, Yu. A.; Kovalev, G. V.; Anisimova, V. A.; Spasov, A. A.; Avdyunina, N. I.; Alekseeva, V. G.; Korol, E. L.; Barchan, I. A.; Ionov, I. D.; Shaidrov, V. V.
CORPORATE SOURCE: Inst. Fiz. Org. Khim., Rostov, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1985), 19(4), 412-19
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 103:141887
GI For diagram(s), see printed CA Issue.
AB Imidazobenzimidazole ketones I (R = furyl, 5-bromofuryl, 4-Me2NC6H4; R1 = Ph, Me, 4-BrC6H4; NR22 = Et2N, piperidino) were prepared by base catalyzed condensation of RCHO with acetyl imidazobenzimidazoles. Ketones II [R3 = Me, Bu; R4 = 5-nitrofuryl, 5-nitrothienyl, Q, Q1 (R5 = Me, R6R7 = pentainethylene; R5 = H; R6 = R7 = Me)] were obtained by Wittig condensations of R4 CHO and carbohydrate aldehydes. Some I possess hypotensive and spasmolytic activity, but their antiinflammatory activities were less than that of amidopyrone. II possess bactericidal activity at high concentration
IT 23572-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



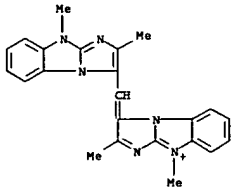
●2 HCl

L4 ANSWER 79 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:572988 HCAPLUS
DOCUMENT NUMBER: 101:172988
TITLE: Acid-base properties of cyanine dyes from imidazo[1,2-a]benzimidazole
AUTHOR(S): Pakhomov, A. S.; Anisimova, V. A.; Bagdasarov, K. N.; Chernov'yants, M. S.
CORPORATE SOURCE: M. A. Suslov Rostov State Univ., Rostov, USSR
SOURCE: Zhurnal Analiticheskoi Khimii (1984), 39(6), 1040-3
CODEN: ZAKHA8; ISSN: 0044-4502
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



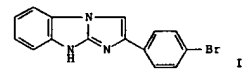
AB Cyanines I (R = Me, Ph, C6H4NO2-4; X = I, OAc) were prepared and their protonation equilibrium studied on the H+ acidity scale. The pKa values were
-1.59, -1.54, and -2.39 for R = Me, Ph, and C6H4NO2-4, resp. The pK values for hydrolysis, which limits their usefulness on the basic side, were 8.48, 9.60, and 9.51, resp. Thus, the dyes are useful as anal. reagents over a wide pH range.
IT 92570-03-1
RL: PRP (Properties)
(absorption spectra and protonation equilibrium of)
RN 92570-03-1 HCAPLUS
CN 3H-Imidazo[1,2-a]benzimidazolium, 3-[(2,9-dimethyl-9H-imidazo[1,2-a]benzimidazol-3-yl)methylene]-2,9-dimethyl-, iodide (9CI) (CA INDEX NAME)

L4 ANSWER 79 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

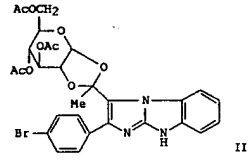


●I⁻

L4 ANSWER 80 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:103759 HCAPLUS
DOCUMENT NUMBER: 100:103759
TITLE: Molecular structure of 3,4,6-tri-O-acetyl-1,2-O-[(1S)-1-[2-(p-bromophenyl)-9H-imidazo[1,2-a]benzimidazol-3-yl]ethylidene]-α-D-glucopyranose acetone solvate
AUTHOR(S): Takayanagi, Hiroaki; Ogura, Haruo; Tsuzuno, Nobuyasu; Kubota, Isao; Iitaka, Yoichi
CORPORATE SOURCE: Sch. Pharm. Sci., Kitasato Univ., Tokyo, 108, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1983), 56(11), 3537-8
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

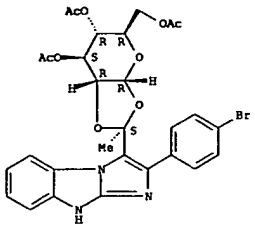


II

AB The structure of a product from a reaction mixture of imidazobenzimidazole I and 2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl bromide in the presence of NaI, hexamethyldisilazane, and (NH4)2SO4 has been established as II (title compound) by x-ray anal.
IT 88990-63-0
RL: PRP (Properties)
(crystal and mol. structure of)
RN 88990-63-0 HCAPLUS
CN α-D-Glucopyranose, 1,2-O-[1-[2-(4-bromophenyl)-1H-imidazo[1,2-a]benzimidazol-3-yl]ethylidene]-, 3,4,6-triacetate, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 80 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L4 ANSWER 81 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:35296 HCAPLUS
DOCUMENT NUMBER: 100:35296
TITLE: Polyurethane resin compositions for casting
PATENT ASSIGNEE(S): Janome Sewing Machine Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

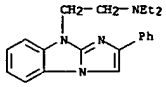
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58087150	A2	19830524	JP 1981-185172	19811120
JP 02050951	B4	19901105		

PRIORITY APPLN. INFO.: JP 1981-185172 19811120

AB Polyurethane moldings for substitution of ABS polymer moldings contain 3-45% mixts. of scaly mica having weight average aspect ratio >10 and size 100-400 mesh and glass beads having size 50-200 mesh in ratio 1:0.02-1. Thus, test pieces prepared from Ru-13 [88386-21-4] (polyurethane) 100, phlogopite 30, and glass beads 5 parts had tensile strength 399 kg/cm2, flexural strength 528 kg/cm2, Shore A hardness 99, deformation 0.20 mm at 50° and load 50 g, and thermal expansion coefficient (mm/°C + 10-5) 6.4, compared with 194, 294, 95, 2.8, and 16.1, resp., for a test pieces containing no fillers.

IT **23572-32-9**
RL: USES (Uses)
(fillers for, phlogopite and glass beads as)

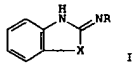
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

L4 ANSWER 82 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:521637 HCAPLUS
DOCUMENT NUMBER: 99:121637
TITLE: Pyrolyses of 2-aminobenzazoles
AUTHOR(S): Martineau, Andre; DeJongh, Don C.
CORPORATE SOURCE: Dep. Chem., Univ. Montreal, Montreal, QC, H3C 3V1, Can.
SOURCE: Journal of Analytical and Applied Pyrolysis (1983), 5(1), 39-68
CODEN: JAAPDD; ISSN: 0165-2370
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 99:121637
GI

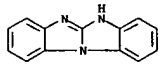


I

AB The pyrolysis and mass spectral fragmentation of I (R = Ph, H; X = O, NH, S) follow similar paths and mechanisms. The replacement of H in I (R = H) by Ph allowed the observation of reaction intermediates, in both the pyrolysis and the mass spectra, which were too unstable for direct observation with I (R = H); the Ph group behaved as an internal trapping group. The M+ and (M - H)+ peaks are the most intense mass spectral peaks for I.

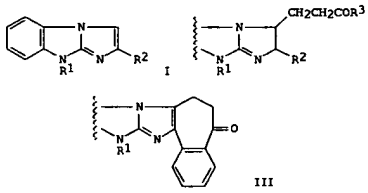
IT **28890-99-5P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and mass spectrum of)

RN 28890-99-5 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 83 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:422377 HCAPLUS
DOCUMENT NUMBER: 99:22377
TITLE: Synthesis of 3-(imidazo[1,2-a]benzimidazol-3-yl)propionic acids and their derivatives
AUTHOR(S): Anisimova, V. A.; Zhurkina, L. I.; Chub, N. K.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov, 344006, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1983), (2), 271-2
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

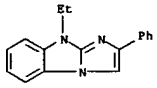


I II III

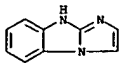
AB Addition of CH2:CHR (R = CO2H, CO2Me, CN) to imidazobenzimidazoles I (R1 = Me, Et, R2 = Ph; R1 = R2 = Me) at 70-90° gave 80-100% II (R3 = OH, OMe, NH2). Addition of CH2:CHCO2H to I (R2 = Ph) at 110-120° gave 95-97% III.

IT **2208-82-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with acrylic acid or or acrylonitrile)

RN 2208-82-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethyl-2-phenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



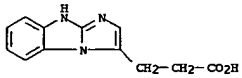
L4 ANSWER 84 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:125914 HCAPLUS
DOCUMENT NUMBER: 98:125914
TITLE: Research on the chemistry of heterocycles at Rostov State University. (Review)
AUTHOR(S): Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, 344090, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1982), (12), 1589-604
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Russian
AB A review of research on benzimidiazoles imidiazolo[1,2-a]benzimidazoles, indazoles, and 2-diazo- and 2-azobenzimidazoles during 1957-1982 with 86 refs.
IT **247-79-0D**, derivs.
RL: MSC (Miscellaneous)
(chemical of)
RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 85 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:107288 HCAPLUS
DOCUMENT NUMBER: 98:107288
TITLE: 3-(Imidazo[1,2-a]benzimidazol-3-yl) and 3-(imidazo[1,2-a]pyridin-3-yl)propionic acid or their derivatives
INVENTOR(S): Anisimova, V. A.; Zhurkina, L. I.; Chub, N. K.
PATENT ASSIGNEE(S): Rostov State University, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1982, (30), 295-6.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 904296	A1	19820815	SU 1980-2909134	19800410

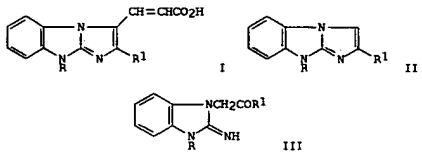
PRIORITY APPLN. INFO.: SU 1980-2909134 19800410
OTHER SOURCE(S): CASREACT 98:107288
GI For diagram(s), see printed CA Issue.
AB Title compds. I (X = CH:CHCH:CH or O; R = alkyl; R1 = alkyl, aryl; R2 = H, alkyl; R3 = OH, alkoxy, amino) were prepared by treating II or III or their mineral acid salts with CH2:CR2Y [Y = alkoxycarbonyl, CO2H, cyano] in polyphosphoric acid at 80-130°. The reaction with CH2:CR2CO2H were carried out at 80-90°.
IT **84797-39-7DP**, derivative
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84797-39-7 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole-3-propanoic acid (9CI) (CA INDEX NAME)



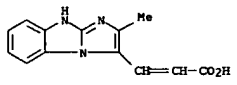
L4 ANSWER 86 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:89357 HCAPLUS
DOCUMENT NUMBER: 98:89357
TITLE: 3-(Imidazo[1,2-a]benzimidazol-3-yl)acrylic acids
INVENTOR(S): Anisimova, V. A.; Zhurkina, L. I.; Simonov, A. M.
PATENT ASSIGNEE(S): Rostov State University, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1982, (30), 295.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 904295	A1	19820815	SU 1980-2908582	19800410

PRIORITY APPLN. INFO.: SU 1980-2908582 19800410
GI



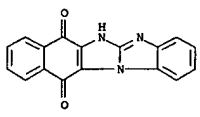
AB The title compds. I (R = alkyl, R1 = Me, Ph, p-BrC6H4) were prepared by treating II or III with propiolic acid at 65-75° in polyphosphoric acid.
IT **84705-02-2DP**, alkyl derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84705-02-2 HCAPLUS
CN 2-Propenoic acid, 3-(2-methyl-1H-imidazo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)



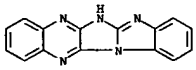
L4 ANSWER 87 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1982:162654 HCAPLUS
DOCUMENT NUMBER: 96:162654
TITLE: A convenient synthesis of polyfused heterocyclic systems from heterocyclic amines and 2,3-dichloronaphthoquinone using phase transfer catalysis
AUTHOR(S): El-Shafei, Ahmed Kamal; Sultan, Adel; Vernin, Gaston
CORPORATE SOURCE: Chem. Dep., Fac. Sci., Sohag, Egypt
SOURCE: Heterocycles (1982), 19(2), 333-8
CODEN: HTCYAM; ISSN: 0385-5414
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

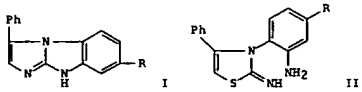
AB Heterocycles I (R = H, Me, Et, Ph), II, III (R1 = Me, Pr), and IV-IX were prepared by cyclization of 2,3-dichloronaphthoquinone with the appropriate heterocyclic amine in benzene, 50% aqueous NaOH, Bu4N+Br- (as phase-transfer catalyst), 4-6 h at 60°.
IT **81411-86-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 81411-86-1 HCAPLUS
CN 5H-Naphth[2',3':4,5]imidazo[1,2-a]benzimidazole-7,12-dione (9CI) (CA INDEX NAME)



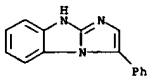
L4 ANSWER 88 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1982:122753 HCAPLUS
DOCUMENT NUMBER: 96:122753
TITLE: Synthesis of some new heterocyclic systems containing a bridgehead nitrogen atom. Reaction of 2,3-dichloroquinoxaline with N-heteroaromatic amines
AUTHOR(S): El-Shafei, Ahmed Kamal; El-Kashef, Hussein Salama; Ahmed, Abdel-Badih; Ghattas, G.
CORPORATE SOURCE: Chem. Dep., Fac. Sci., Sohag, Egypt
SOURCE: Gazzetta Chimica Italiana (1981), 111(9-10), 409-12
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 2,3-Dichloroquinoxaline has been cyclocondensed with MeCSNH2, 2-aminopyridine, 2-aminothiazoles, 2-aminothiadiazoles, 2-aminobenzimidazole and 2-mercaptobenzimidazole to give the corresponding heterocyclic systems. The chloroquinoxalinylamines were also obtained in some cases.
IT 81106-70-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 81106-70-9 HCAPLUS
CN 5H-Benzimidazo[1',2':1,2]imidazo[4,5-b]quinoxaline (9CI) (CA INDEX NAME)



L4 ANSWER 89 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1981:587155 HCAPLUS
DOCUMENT NUMBER: 95:187155
TITLE: Studies of heterocyclics: synthesis of 7-substituted 3-phenyl-1H-imidazo[1,2-a]benzimidazoles
AUTHOR(S): Soni, R. P.
CORPORATE SOURCE: Dep. Chem., Univ. Jodhpur, Jodhpur, India
SOURCE: Australian Journal of Chemistry (1981), 34(7), 1557-9
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 95:187155
GI



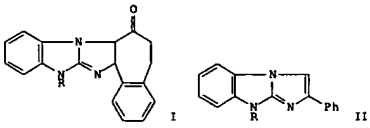
AB Imidazo[1,2-a]benzimidazoles I (R = H, Me, MeO, EtO, Br, HO) were prepared by thermal rearrangement of iminothiazoline II with loss of H2S.
IT 75542-79-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 75542-79-9 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 3-phenyl- (9CI) (CA INDEX NAME)



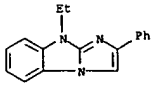
L4 ANSWER 90 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1981:569188 HCAPLUS
DOCUMENT NUMBER: 95:169188
TITLE: Derivatives of Benzocyclohepta[5',6':4,5]imidazo[1,2-a]benzimidazole
INVENTOR(S): Anisimova, V. A.; Avdyunina, N. I.; Simonov, A. M.
PATENT ASSIGNEE(S): Rostov State University, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (27), 278-9.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 753094	A1	19810723	SU 1979-2739676	19790322
PRIORITY APPLN. INFO.:			SU 1979-2739676 A	19790322

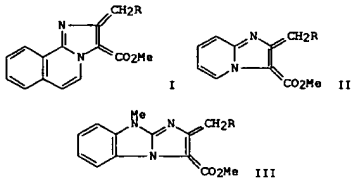
OTHER SOURCE(S): CASREACT 95:169188
GI



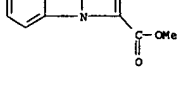
AB Title compds. I (R = Me, Et, Pr, Bu) were prepared by cyclocondensation reaction of phenylimidazobenzimidazoles II with BrCH2CH2CO2H in polyphosphoric acid at 90-105°.
IT 2208-82-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with bromopropionate)
RN 2208-82-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethyl-2-phenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



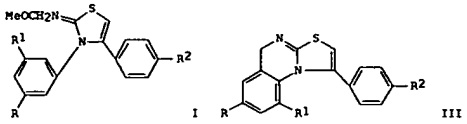
L4 ANSWER 91 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1981:121408 HCAPLUS
DOCUMENT NUMBER: 94:121408
TITLE: 1-Chlorobenzotriazole as a hetarylating agent
AUTHOR(S): Kuz'menko, V. V.; Kuz'menko, T. A.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1980), (10), 1424-5
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



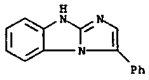
AB Treatment of imidazoles I, II and III (R = H) with 1-chlorobenzotriazole gave 23-57% I, II and III (R = 1-benzotriazolyl).
IT 40783-82-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(hetarylation of, with chlorobenzotriazole)
RN 40783-82-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 2,9-dimethyl-, methyl ester (9CI) (CA INDEX NAME)



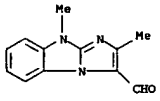
L4 ANSWER 92 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:620688 HCAPLUS
DOCUMENT NUMBER: 93:220688
TITLE: Studies in heterocyclics. Part IX. Synthesis of thiazolo[3,2-a]quinazolines and imidazolo[1,2-a]benzimidazoles
AUTHOR(S): Sondhi, S. M.; Mahajan, M. P.; Ralhan, N. K.
CORPORATE SOURCE: Dep. Chem., Punjabi Univ., Patiala, 147002, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1979), 17B(6), 632-5
CODEN: IJSBDB; ISSN: 0376-4699
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 93:220688
GI



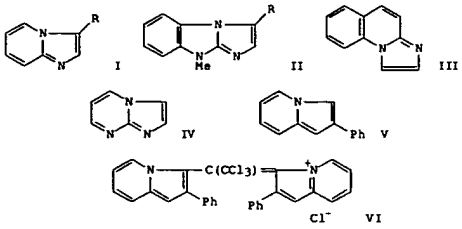
AB 2-N-Methoxymethylimino-3,4-diphenyl-4-thiazolines I (R, R1 = H, Me, OMe; R2 = H, Br, Me, OMe, OEt), obtained from 2-imino-3,4-diphenyl-4-thiazolines (II) and CH2O in MeOH undergo cyclization to 9H-thiazolo[3,2-a]quinazolines III, which have also been obtained in a single step from II and paraformaldehyde. 3-(o-Aminoaryl)-2-imino-4-phenyl-4-thiazolines and 2-imino-3,4-diaryl-4-thiazolines undergo thermal rearrangements to 3-phenyl-9H-imidazolo[1,2-a]benzimidazoles and N-nitriles NCNR3C(:CHSH)C6H4R4-4 (R3 = Ph, 4-MeC6H4, 4-MeOC6H4, 2-naphthyl, 1-naphthyl; R4 = H, Me, Br), resp.
IT **75542-79-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 75542-79-9 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 3-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 93 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

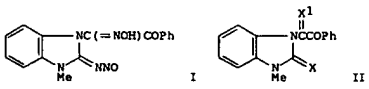


L4 ANSWER 93 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:549290 HCAPLUS
DOCUMENT NUMBER: 93:149290
TITLE: Chloral as a formylation agent for some bridging hetero systems
AUTHOR(S): Anisimova, V. A.; Avdyunina, N. I.; Pozharskii, A. F.; Simonov, A. M.; Talanova, L. N.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1980), (4), 528-37
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 93:149290
GI

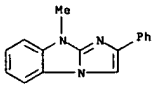


AB Heterocycles having a sufficient local π excess, e.g., I (R = H) and II (R = H), reacted with chloral to give an alc. [I and II, R = CH(OH)CCl3] and an aldehyde (I and II, R = CHO). No reaction occurred if the local π excesses were too small, e.g., in III, or if the total π charge was pos., e.g., in IV. When large local and total π excesses were present, e.g., in V, 2 mols. of the heterocycle reacted to give a cyanine dye such as VI.
IT **28992-72-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 28992-72-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxaldehyde, 2,9-dimethyl- (8CI, 9CI) (CA INDEX NAME)

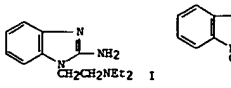
L4 ANSWER 94 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:446516 HCAPLUS
DOCUMENT NUMBER: 93:46516
TITLE: Studies on imidazo[1,2-a]benzimidazole derivatives. 19. Effect of excess nitrous acid on 9-methyl-2-phenylimidazo[1,2-a]benzimidazole
AUTHOR(S): Anisimova, V. A.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1980), (1), 68-70
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 93:46516
GI

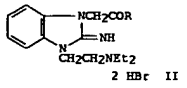


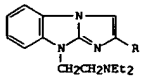
AB The title reaction gave 93% nitrosoiminobenzimidazoline I. Heating I in 10% NaOH at 20° gave ketone II (X = O, X1 = NOH) but in 10% HCl imine II (X = NH, X1 = O) was formed. II (X = NH, X1 = O) was hydrolyzed to give II (X = X1 = O); which was also obtained by heating II (X = NH, X1 = O).
IT **21431-82-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with excess nitrous acid)
RN 21431-82-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 95 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:611327 HCAPLUS
DOCUMENT NUMBER: 91:211327
TITLE: Synthesis and pharmacological properties of some disubstituted imidazo[1,2-a]benzimidazole derivatives
AUTHOR(S): Kovalev, G. V.; Anisimova, V. A.; Simonov, A. M.; Gofman, S. M.; Petrov, V. I.; Tyurenkov, I. N.; Fomin, Yu. K.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov-on-Don, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 57-62
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 91:211327
GI

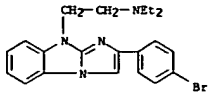

I


2 HBr II

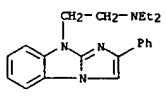

2 HX III

AB Treatment of aminobenzimidazole I with BrCH2COR (R = p-BrC6H4, 1-naphthyl, Me3C, p-MeOC6H4) gave 85-90% imine II, which were cyclized to give 90-7% imidazoimidazoles III (X = Cl). III (R = Ph, X = Br, NO3, 1/2 SO4) were prepared similarly. III, and 1-methyl-2-phenyl- (IV) and 1-methyl-2-phenyl-2,3-dihydroimidazo[1,2-a] benzimaidazole (V) were tested for their hypotensive, adrenoblocking, antispasmodic, muscle relaxant, antihistaminic and antiphlogistic activity; their effect on the heart and central nervous system was also investigated. III showed adrenoblocking activity. IV and V had weak hypotensive activity but did not have a depressive effect on the central and periferal receptors. The tested compds. did not have antispasmodic activity, muscle relaxant activity, analgesic or antihistaminic activity.
IT **38652-51-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and pharmacol. of)
RN 38652-51-6 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(4-bromophenyl)-N,N-diethyl-, dihydrochloride (9CI) (CA INDEX NAME)

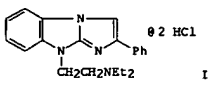
L4 ANSWER 95 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)


●2 HCl

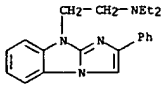
L4 ANSWER 96 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:551285 HCAPLUS
DOCUMENT NUMBER: 91:151285
TITLE: Comparative study of the hypotensive, sedative, and antiinflammatory activity of some imidazole, benzimidazole and imidazobenzimidazole derivatives
AUTHOR(S): Gofman, S. M.; Ermilova, E. S.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1977), 30(3), 180-5
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Among 8 imidazobenzimidazoles tested, RU-63 [71503-75-8], RU-64 [71503-76-9], RU-67 [71503-78-1], RU-13 [**23572-32-9**], and RU-65 [71503-77-0] had high hypotensive activity, lowering by ≥25% the arterial pressure of mice receiving them at 10 mg/kg, i.p. RU-67 had a therapeutic index (i.e. ED50/LD50) of 94, the highest value in the group. The 2 imidazole and 3 benzimidazole compds. tested had less hypotensive effect. All the compds. potentiated hexenal narcosis to a degree which correlated with their hypotensive effect. All the compds. were antiinflammatory . The most effective were the imidazobenzimidazoles RU-68 [71503-79-2], RU-69 [71503-80-5], and RU-50 [71503-74-7], the imidazoles RU-43 [71503-72-5] and RU-44 [71503-73-6], and the benzimidazole RU-28 [71503-70-3]. These compds were more effective than dibazole and were at least equal to aminopyrine.
IT **23572-32-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)


●2 HCl

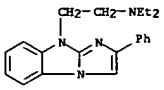
L4 ANSWER 97 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:551284 HCAPLUS
DOCUMENT NUMBER: 91:151284
TITLE: Antihypertensive activity of new derivatives of imidazobenzimidazole
AUTHOR(S): Pan'shina, M. V.; Vakulina, T. A.; Fomin, Yu. K.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1977), 30(3), 164-72
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI


I

AB RU-13 (I) [**23572-32-9**] at 1/15 LD50 normalized blood pressure in dogs with exptl. hypertonia and decreased abnormalities in their EKG. RU-32 [67015-51-4] and RU-67 [71503-78-1] decreased blood pressure in rabbits with exptl. hypertonia. All 3 compds. were more effective than dibazole in the extent and duration of action. The compds. were effective when given i.m. or orally; i.v. was not recommended because of rapid blood pressure drop.
IT **23572-32-9**
RL: BIOL (Biological study)
(blood pressure response to)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

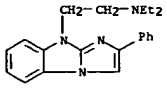

●2 HCl

L4 ANSWER 98 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:534084 HCAPLUS
DOCUMENT NUMBER: 91:134084
TITLE: Biochemical mechanisms of the cardiotropic and vasotropic effect of vascular drugs
AUTHOR(S): Spasov, A. A.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1977), 30(3), 90-104
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The effects of dibazole [621-72-7] and its imidazole analog RU-13 [23572-32-9], apressin [86-54-4], No-Spa [985-12-6], and ethiron [1071-37-0] on the functional-biochem. characteristics of the heart and on the biochem. mechanisms regulating vascular tone were studied in rats, cats, and dogs. In isolated cat atria, ethiron and apressin, which have pos. inotropic activity, stimulated carbohydrate metabolism, increased the concentration of pyruvic acid, and decreased the concentration of lactate, associated with an increase in malate dehydrogenase and cytochrome oxidase activities. Dibazole and RU-13, which have neg. inotropic effects, decreased glycolysis and carbohydrate metabolism :. They decreased the concentration of lactate and inhibited malate dehydrogenase, lactate dehydrogenase, and cytochrome c oxidase activities. The compds. having neg. chronotropic activity, dibazole, RU-13, No-Spa, and apressin, decreased the activity of glucose-6-phosphate dehydrogenase. Ethiron, which has pos. chronotropic activity, increased this pentose phosphate pathway enzyme. The hypotensive compds., dibazole, RU-13, No-Spa, and apressin, interfered with carbohydrate metabolism in the aorta, whereas the hypertensive preparation, ethiron, increased ATPase activity but had no effect on carbohydrate metabolism
IT **23572-32-9**
RL: BIOL (Biological study)
(carbohydrate and energy metabolism by artery and heart response to, cardiotropic and vasotropic effects in relation to)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



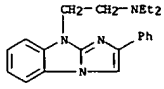
●2 HCl

L4 ANSWER 99 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:517412 HCAPLUS
DOCUMENT NUMBER: 91:117412
TITLE: Peripheral mechanisms of action of some vasoactive substances
AUTHOR(S): Petrov, V. I.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1977), 30(3), 119-21
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The hypotensive compds. dibazole [621-72-7], RU-13 [23572-32-9], RU-25 [54381-23-6], RU-32 [67015-51-4], apressin [86-54-4], and No-Spa [985-12-6] each caused dilatation of cat arterial segments in vitro when present at 1:1000-100,000. The compds. also reduced the pressor reactions of the segments to elec. stimulation. RU-13, RU-25, RU-32, and apressin, but not dibazole or No-Spa, decreased the pressor response of the segments to adrenaline.
IT **23572-32-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(blood vessel response to)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



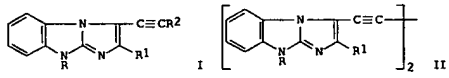
●2 HCl

L4 ANSWER 100 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:517411 HCAPLUS
DOCUMENT NUMBER: 91:117411
TITLE: Effect of vasoactive drugs on humoral factors of vasomotor regulation - blood kinin system
AUTHOR(S): Spasov, A. A.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1977), 30(3), 83-9
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The hypertensive compound ethiron [1071-37-0] and the hypotensive compds. No-Spa [985-12-6], RU-13 [23572-32-9], and apressin [86-54-4] all lowered blood kininogen in rats when given i.v. or i.m., which indicates that they activated the kinin system. Ethiron required only 5 min to have this effect while the hypotensive compds. required 15 min. It was not clear whether the activation of the kinin system was a direct result of the action of the compds. or if it was part of the reaction of the organism to the change in blood pressure.
IT **23572-32-9**
RL: BIOL (Biological study)
(blood kinin system response to)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

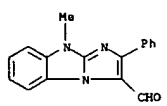


●2 HCl

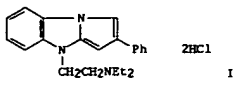
L4 ANSWER 101 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:103897 HCAPLUS
DOCUMENT NUMBER: 90:103897
TITLE: Synthesis and pharmacological activity of acetylene compounds of the imidazo[1,2-a]benzimidazole series
AUTHOR(S): Anisimova, V. A.; Avdyunina, N. I.; Simonov, A. M.; Kovalev, G. V.; Simkina, Yu. N.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov Univ., Rostov, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1978), 12(12), 40-5
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 90:103897
GI



AB Ethynylbenzimidazoles I (R = Me, Et2NCH2CH2, R1 = Ph; R = Me, PhCH2, R1 = Me; R2 = H) were prepared in 53-90% yields by dehydration of the corresponding 3-acetylimidazobenzimidazole with P2O5. Treatment of I (R2 = H) with Me2CO gave 40-54% I (R2 = Me2COH), and treatment with CH2O and Et2NH in the presence of CuCl gave 70-82% I (R2 = CH2NEt2). Addnl. obtained were 75 and 87% II (R = Me, R1 = Ph; R = R1 = Me). I (R = Me, R1 = Ph, R2 = H, CH2NEt2) were effective as bactericides against Staphylococcus.
IT **28992-76-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(Wittig reaction with Me (triphenylphosphoranylidene)acetates)
RN 28992-76-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxaldehyde, 9-methyl-2-phenyl- (8CI, 9CI) (CA INDEX NAME)

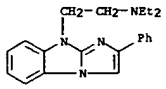


L4 ANSWER 102 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:499941 HCAPLUS
DOCUMENT NUMBER: 89:99941
TITLE: Change in some pharmacological properties in derivatives of imidazole systems
AUTHOR(S): Vanieva, N. F.; Lyashchenko, I. N.; Simonov, A. M.; Tertov, B. A.; Koblik, A. V.; Anisimova, V. A.; Avdyunina, N. I.
CORPORATE SOURCE: Rostov. Med. Inst., Rostov, USSR
SOURCE: Izvestiya Severo-Kavkazskogo Nauchnogo Tsentra Vysshei Shkoly, Estestvennye Nauki (1977), 5(3), 46-7
CODEN: ISTVAY; ISSN: 0321-3005
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



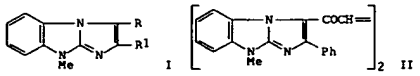
I

AB Of 13 imidazole derivs. tested, 3 (RU-13 (I) [23572-32-9], RU-32 [67015-51-4], and RUM-17 [34740-37-9]) had analgesic activity in rats; RU-13 was more effective than morphine. The resp. i.p. LD50 values in mice were 675, 131, and 675 mg/kg compared with 308 mg/kg for morphine.
IT 23572-32-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analgesic activity of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



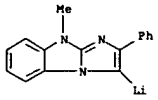
●2 HCl

L4 ANSWER 103 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:443247 HCAPLUS
DOCUMENT NUMBER: 89:43247
TITLE: Studies on derivatives of imidazo[1,2-a]benzimidazole. XVI. Synthesis of 3-alkoxycarbonyl-2-arylimidazo[1,2-a]benzimidazoles
AUTHOR(S): Kuz'menko, T. A.; Anisimova, V. A.; Avdyunina, N. I.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1978), (4), 522-5
CODEN: KGSSAQ; ISSN: 0453-8234
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

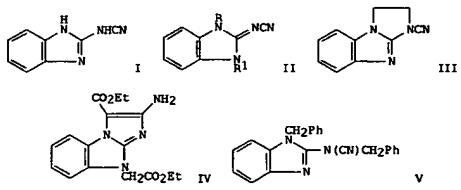


I II

AB The title compds. I (R = CO2Me; R1 = Ph, 2-C10H7) were obtained in 93 and 95% yields by treating I (R = H) with Cl3CCOCl to give 41 and 43% I (R = COCCl3) followed by heating with NaOMe. I (R = CO2H, R1 = Ph) was obtained in 94% yield by carbonation of I (R = Li) with CO2. Addnl. obtained was 52% II.
IT 67073-21-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and carbonation of)
RN 67073-21-6 HCAPLUS
CN Lithium, (9-methyl-2-phenyl-9H-imidazo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

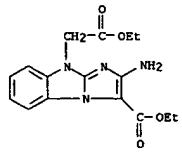


L4 ANSWER 104 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:135933 HCAPLUS
DOCUMENT NUMBER: 88:135933
TITLE: Alkylation of some cyano derivatives of benzimidazoles
AUTHOR(S): Serafin, Barbara; Konopski, Leszek; Stolarczyk, Leszek
CORPORATE SOURCE: Inst. Org. Chem. Technol., Polytech. Univ., Warsaw, Pol.
SOURCE: Roczniki Chemii (1977), 51(12), 2355-68
CODEN: ROCHAC; ISSN: 0035-7677
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 88:135933
GI



I II III IV V

AB The IR of I indicates that it exists as the tautomer II (R = R1 = H). This is supported by the alkylation products (II; R = H, R1 = CH2Ph, CH2CH:CH2; R = R1 = Me, PhCH2) of I and Me2SO4, PhCH2Cl, or CH2:CHCH2Cl in DMF containing NaH. The reaction of I with BrCH2CH2Br gives III in which the cyanoamino tautomeric form occurs. BrCH2CO2Et and II (R = R1 = H) gives IV via a Thorpe type cyclization. I and PhCH2Cl or PhCH2Br gives V. The mechanism of the alkylation reactions is discussed.
IT 66094-39-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 66094-39-1 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-acetic acid, 2-amino-3-(ethoxycarbonyl)-, ethyl ester (9CI) (CA INDEX NAME)

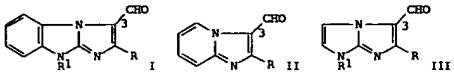


L4 ANSWER 104 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

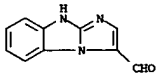
L4 ANSWER 105 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:552204 HCAPLUS
DOCUMENT NUMBER: 87:152204
TITLE: Condensed imidazole carboxaldehydes
INVENTOR(S): Simonov, A. M.; Anisimova, V. A.; Avdyunina, N. I.
PATENT ASSIGNEE(S): Rostov State University, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1977, 54(23), 76-7.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 562554	T	19770625	SU 1975-2104599	19750211
PRIORITY APPLN. INFO.:			SU 1975-2104599	A 19750211

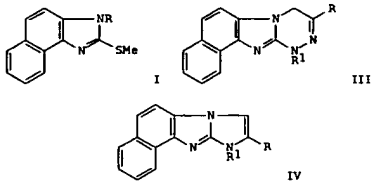
GI



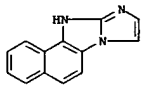
AB Title compds. I-III (R = H, Me, Ph, halophenyl, naphthyl; R1 = Me, PhCH2, (dialkylamino)alkyl) were prepared by treating the corresponding 3-unsubstituted condensed imidazoles with Cl3CCHO and hydrolyzing the resulting 3-(1-hydroxy-3,3,3-trichloroethyl) derivs.
IT **64196-74-3DP**, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 64196-74-3 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole-3-carboxaldehyde (9CI) (CA INDEX NAME)



L4 ANSWER 106 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:453159 HCAPLUS
DOCUMENT NUMBER: 87:53159
TITLE: Synthesis, structure, and reactivity of N-substituted 2-methylmercaptonaphth[1,2-d]imidazoles
AUTHOR(S): Povstyanoi, M. V.; Kochergin, P. M.; Yakubovskii, E. A.
CORPORATE SOURCE: Odess. Tekhnol. Inst. Pishchevoi Prom. im. Lomonosova, Kherson, USSR
SOURCE: Tezisy Dokl. - Nauchno-Tekh. Konf. "Khim. Primen. Formazanov", 2nd (1975), Meeting Date 1974, 26-8. Editor(s): Lipunov, G. N. Ural. Politekh. Inst.: Sverdlovsk, USSR.
CODEN: 35EAAU
DOCUMENT TYPE: Conference
LANGUAGE: Russian
GI

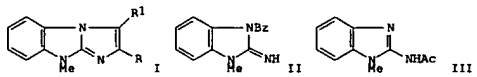


AB Naphthimidazole I [R = CH2COR1 (R1 = aryl) (II), obtained from I (R = H), on treatment with R2NHNH2 (R2 = H, alkyl, aryl, heterocyclic) gave the corresponding hydrazones at <100° and the triazines III at >100°. Similarly II and R3NH2 (R3 = H, alkyl, aryl) gave imidazoles IV (no data).
IT **36759-83-8DP**, alkyl and aryl derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36759-83-8 HCAPLUS
CN 10H-Imidazo[1,2-a]naphth[1,2-d]imidazole (9CI) (CA INDEX NAME)

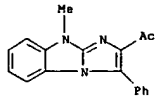


L4 ANSWER 106 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

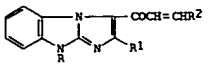
L4 ANSWER 107 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:189804 HCAPLUS
DOCUMENT NUMBER: 86:189804
TITLE: Studies of imidazo[1,2-a]benzimidazoles. XV. The 2-acyl-substituted imidazo[1,2-a]benzimidazoles
AUTHOR(S): Koshchienko, Yu. V.; Suvorova, G. M.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1977), (1), 111-15
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

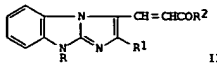


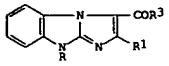
AB Imidazobenzimidazoles I (R = COMe, COPh, R1 = Ph) were obtained in 58 and 61% yields by cyclization of II with BrCH2COR. I (R = H, R1 = Me, Ph) were obtained in 52% from III by treatment with Na, condensation with BrCH2COR1, hydrolysis, and cyclization. Addnl. obtained were 58 and 80% I (R = COPh, COMe, R1 = Me).
IT **55558-59-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 55558-59-3 HCAPLUS
CN Ethanone, 1-(9-methyl-3-phenyl-9H-imidazo[1,2-a]benzimidazol-2-yl)- (9CI) (CA INDEX NAME)



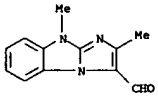
L4 ANSWER 108 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:171326 HCAPLUS
DOCUMENT NUMBER: 86:171326
TITLE: Research on imidazo[1,2-a]benzimidazole derivatives. XIV. α,β-Unsaturated ketones of imidazo[1,2-a]benzimidazole series
AUTHOR(S): Anisimova, V. A.; Avdyunina, N. I.; Simonov, A. M.; Kovalev, G. V.; Gofman, S. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1976), (12), 1660-5
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI


I


II

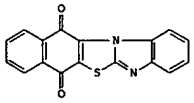

III

AB The title compds. I (R = Me, CH2CH2NEt2, R1 = Me, Ph, R2 = Ph, p-MeOC6H4, p-O2NC6H4, m-O2NC6H4, 2-furyl, 5-nitro-2-furyl, p-Me2NC6H4) and II (R = Me, R1 = Me, Ph, R2 = Ph, p-MeOC6H4, m-O2NC6H4, 1-naphthyl, 2-furyl) were obtained in 34-98% yields by base-catalyzed condensation of III (R = Me, R1 = Me, Ph, R3 = Me, H; R = CH2CH2NEt2, R1 = Ph, R3 = Me) with the corresponding aldehyde or ketone. I and II were useful as antihypertensives.
IT **28992-72-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with aldehydes and ketones)
RN 28992-72-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxaldehyde, 2,9-dimethyl- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 108 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 109 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1976:523818 HCAPLUS
DOCUMENT NUMBER: 85:123818
TITLE: Studies on benzimidazole derivatives. XL. Reaction of mercapto derivatives of azoles with haloquinones
AUTHOR(S): Simonov, A. M.; Komissarov, V. N.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1976), (6), 783-5
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 85:123818
GI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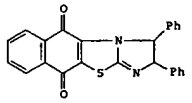
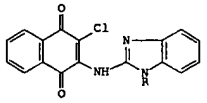
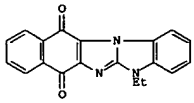
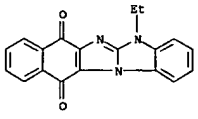

III


IV


V

AB Reaction of 2-mercaptobenzimidazole with 2,3-dichloro-1,4-naphthoquinone (I) gave 70.7% II; III was prepared in 67% yield in a similar manner. Naphthoquinones IV (R = Et, PhCH2) were prepared in 43 and 40% yield, resp., by reaction of the corresponding benzimidazole with I. Treatment of IV (R = Et) with glacial HOAc gave 77% V.
IT **60463-72-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 60463-72-1 HCAPLUS
CN 5H-Naphth[2',3':4,5]imidazo[1,2-a]benzimidazole-7,12-dione, 5-ethyl-, monohydrochloride (9CI) (CA INDEX NAME)

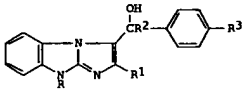
L4 ANSWER 109 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



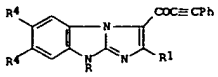
● HCl

L4 ANSWER 110 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:421209 HCAPLUS
DOCUMENT NUMBER: 85:21209
TITLE: Studies in the area of derivatives of imidazo[1,2-a]benzimidazole. XIII. Synthesis and properties of alcohols of the imidazo[1,2-a]benzimidazole series
AUTHOR(S): Anisimova, V. A.; Avdyunina, N. I.; Simonov, A. M.; Kovalev, G. V.; Gofman, S. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1976), (1), 126-34
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 85:21209
GI



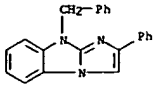
I



II

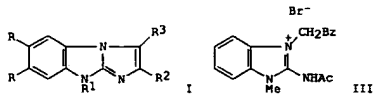
AB The imidazobenzimidazolemethanols I (R = Me, PhCH2, Et2NCH2CH2; R1 = Me, Ph, α-naphthyl, 4-BrC6H4; R2 = H, Me; R3 = H, Me2N, EtO) were prepared by reaction of 3-lithioimidazo[1,2-a]benzimidazoles with 4-R3C6H4COR2 or by Grignard reaction of 4-R3C6H4Br with 3-acetyl- or 3-formylimidazo[1,2-a]benzimidazoles. The ethynyl alcs. II (R = Me, Et; R1 = Me, Ph; R4 = H, Me) were prepared by condensation of the appropriate 3-formylimidazo[1,2-a]benzimidazoles with PhC.tplbond.CMgBr and subsequent hydrolysis and MnO2 oxidation Hydrochloride salts of I in EtOH possessed hypotensive activity in the rat; e.g. I (R = R1 = Me, R2 = H = R3 = H).HCl (III) at 3 mg/kg decreased arterial blood pressure 50% after 15 min. However, III was toxic at 5 mg/kg.
IT **21431-84-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination and formylation of)
RN 21431-84-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-(phenylmethyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 110 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)



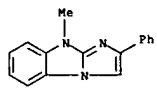
L4 ANSWER 111 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:421208 HCAPLUS
DOCUMENT NUMBER: 85:21208
TITLE: Studies in the area of derivatives of imidazo[1,2-a]benzimidazole. XII. 3-Acyl derivatives of imidazo[1,2-a]benzimidazole
AUTHOR(S): Anisimova, V. A.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1976), (1), 121-5
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 85:21208
GI



I III

AB Acetylation of the imidazobenzimidazoles I (R = H, Me; R1 = Me, Et, PhCH2; R2 = Me, Ph, 4-BrC6H4; R3 = H) by Ac2O gave the corresponding I (R3 = Ac). I (R = H; R1 = Me; R2 = Me, Ph; R3 = Bz), which were not stable under acidic conditions, were prepared by benzoylation of I (R3 = H) (II) by BzCl in the presence of pyridine or by reaction of BzCl with excess II. Alternately, I (R = H, R1 = R2 = Me, R3 = Bz) was prepared by cyclization of the benzimidazole III in DMF containing Et3N.
IT **21431-82-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of)
RN 21431-82-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl- (8CI, 9CI) (CA INDEX NAME)

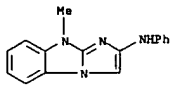


L4 ANSWER 112 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:43937 HCAPLUS
DOCUMENT NUMBER: 84:43937
TITLE: Imidazo[1,2-a]benzimidazole derivatives. XI. Synthesis of 2-arylamino derivatives of 9-methylimidazo[1,2-a]benzimidazole
AUTHOR(S): Simonov, A. M.; Kuz'menko, T. A.; Nachinennaya, L. G.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (10), 1394-8
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 84:43937
GI For diagram(s), see printed CA Issue.
AB Imidazobenzimidazoles (I, R = H, Me, R1 = Ph, p-O2NC6H4, p-ClC6H4, p-EtO2CC6H4) were obtained in 90-5% yields by reaction of 1-methyl-2-aminobenzimidazole with ClCH2CONRR1 to give imines II which were cyclized by POCl3.
IT **57805-42-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 57805-42-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazol-2-amine, 9-methyl-N-phenyl-, compd. with 2,4,6-trinitrophenol (1:1) (9CI) (CA INDEX NAME)

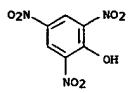
CM 1

CRN 57805-41-1
CMF C16 H14 N4



CM 2

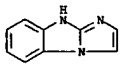
CRN 88-89-1
CMF C6 H3 N3 O7



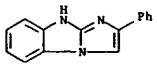
L4 ANSWER 113 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1976:17339 HCAPLUS
DOCUMENT NUMBER: 84:17339
TITLE: 2-Arylamino-9-alkylimidazo[1,2-a]benzimidazole
INVENTOR(S): Simonov, A. M.; Borisova, T. A.
PATENT ASSIGNEE(S): Rostov State University, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1975, 52(27), 70.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 478007	T	19750725	SU 1973-1897003	19730319
PRIORITY APPLN. INFO.:			SU 1973-1897003 A	19730319

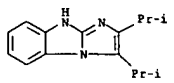
GI For diagram(s), see printed CA Issue.
AB Imidazobenzimidazoles I (R = Ac, R1 = Ph, p-O2NC6H4; R = Me, R1 = Ph; R2 = alkyl) were prepared by reaction of 1-alkyl-2-aminobenzimidazole with anilides of ClCH2CO2H followed by cyclization of the resulting compound in the presence of POCl3.
IT **247-79-0DP**, 1H-Imidazo[1,2-a]benzimidazole, acetamide derivative, 9-alkyl derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



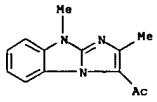
L4 ANSWER 114 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:606163 HCAPLUS
DOCUMENT NUMBER: 83:206163
TITLE: Mass spectra of pyrrolo [1,2-a]benzimidazole and imidazo[1,2-a] benzimidazole derivatives
AUTHOR(S): Anisimova, O. S.; Sheinker, Yu. N.; Palei R. M.; Kochergin, P. M.; Ponomar, V. S.
CORPORATE SOURCE: Vses. Nauchno. Issled. Khim.-Farm. Inst. im Ordzhonikidze, Moscow, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (8), 1124-7
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Mass spectra of the previously prepared pyrrolobenzimidazoles (I, R = Me, H, PhCH2, R1 = H, Me) and imidazobenzimidazoles (II, R = H, Me, Ph, R1 = Ph, Me) were determined
IT **23085-25-8**
RL: PRP (Properties)
(mass spectrum of)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



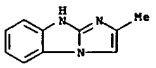
L4 ANSWER 115 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:521574 HCAPLUS
DOCUMENT NUMBER: 83:121574
TITLE: Recent developments in the study of heterocyclic amine extraction chemistry. Application of the formation of intramolecular hydrogen bonding between ligand and coordinated anions in salt extraction
AUTHOR(S): Dziomko, V. M.; Ivanov, O. V.; Avilina, V. N.; Ivashchenko, A. V.; Kazakova, T. S.
CORPORATE SOURCE: All-Union Sci. Res. Inst. Chem. Reagents Ultra High Purity Chem. Subst., Moscow, USSR
SOURCE: Proc. Int. Solvent Extr. Conf. (1974), Volume 2, 1893-906. Editor(s): Jeffreys, G. V. Soc. Chem. Ind.: London, Engl.
CODEN: 30XIAE
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Heterocyclic amines (3,4,5-trikylpyrazoles and bicyclic amidines) were prepared and used to extract transition metal inorg. salts. Formation of intramol. H bonds between amine and anion of the salt stabilized the extracted species. Maximum selectivity is observed in nitrate or sulfate systems.
IT **42183-30-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and extraction capacity of, for transition metals)
RN 42183-30-2 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2,3-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 116 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:514295 HCAPLUS
Correction of: 1975:72874
DOCUMENT NUMBER: 83:114295
Correction of: 82:72874
TITLE: 3-Ethynylimidazo[1,2-a]benzimidazoles
AUTHOR(S): Avdyunina, N. I.; Anisimova, V. A.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1974), (11), 1577-8
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Azoles (I; R = Me, PhCII2, CH2CH2NEt2; R1 = Ph, Me; R2 = C.tplbond.CH) were obtained in 70-85% yields by treatment of I (R2 = COMe) with POCl3-DMF followed by treatment with KOAc.
IT **40783-90-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydration of)
RN 40783-90-2 HCAPLUS
CN Ethanone, 1-(2,9-dimethyl-9H-imidazo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)



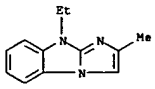
L4 ANSWER 117 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:479148 HCAPLUS
DOCUMENT NUMBER: 83:79148
TITLE: Benzimidazole derivatives. XXXVI. Synthesis and transformations of N-propargyl derivatives of 2-aminobenzimidazole
AUTHOR(S): Popov, I. I.; Tkachenko, P. V.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (4), 523-5
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB 2-Aminobenzimidazole (I, R = H) treated with BrCH2C.tplbond.CH in NaNH2-NH3(l) gave 82% I (R = CH2C.tplbond.CH), which was rearranged by KOH to give 94% I (R = CH:C:CH2) and cyclized by NaOEt-EtOH to yield 83% imidazobenzimidazole (II). Heating I (R = H) with BrCH2C.tplbond.CH in boiling alc. gave 46% quaternary bromide which was treated with concentrated NH4OH to give 95% imine (III, R = CH2C.tplbond.CH). The latter was rearranged by KOH to give 89% III (R = CH:C:CH2) and cyclized to give 50% IV (R = CH:C:CH2). The latter with alc. KOH at 20° gave 80% IV [CH2C(OEt):CH2].
IT **30645-56-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 30645-56-8 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-methyl- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 118 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:428154 HCAPLUS
DOCUMENT NUMBER: 83:28154
TITLE: Benzimidazole derivatives. XXXV. Synthesis and transformations of 1-alkyl-3-(propyn-2'-yl)-2-iminobenzimidazolines
AUTHOR(S): Popov, I. I.; Tkachenko, P. V.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (3), 396-400
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 83:28154
GI For diagram(s), see printed CA Issue.
AB Iminobenzimidazolines (I, R = Me, Et, PhCH2, R1 = H) were obtained in 95-7% yields by alkylation of II with BrCH2C.tplbond.CH followed by treatment with NH4OH. I (R = Me, Et, PhCH2, R1 = Me, Ac, CH2OH) were obtained in 58-85% yields by alkylation, acetylation, and hydroxymethylation of I (R1 = H), resp. Cyclization of III (R = Me, Et, PhCH2), obtained by rearrangement of the corresponding I, gave 93-5% imidazolobenzimidazoles (IV).
IT **22492-28-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 22492-28-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethyl-2-methyl-, compd. with 2,4,6-trinitrophenol (1:1) (9CI) (CA INDEX NAME)

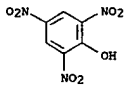
CM 1

CRN 46393-22-0
CMF C12 H13 N3



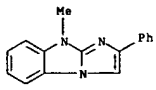
CM 2

CRN 88-89-1
CMF C6 H3 N3 O7

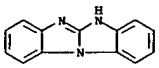


L4 ANSWER 118 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

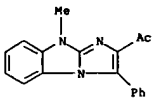
L4 ANSWER 119 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:170796 HCAPLUS
DOCUMENT NUMBER: 82:170796
TITLE: Imidazo [1,2-a]benzimidazole derivatives. X. Nitration of 2,9-disubstituted imidazo [1,2-a]benzimidazole
AUTHOR(S): Anisimova, V. A.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (2), 258-62
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 82:170796
GI For diagram(s), see printed CA Issue.
AB 2,9-Dimethylimidazo[1,2-a]benzimidazole-HNO3 was treated with concentrated H2SO4 at -5 to -10° to give 88% 3-nitro-2,9-dimethylimidazo[1,2-a]benzimidazole, whereas nitration of 9-methyl-2-phenylimidazo[1,2-a]benzimidazole gave a mixture of the isomeric dinitroimidazobenzimidazoles I. The benzimidazoles II (R = Me, H; R1 = Me, Et) were N-alkylated by R3C6H4COCH2Br (R3 = 2-NO2, 3-NO2, 4-NO2) and then cyclized by treatment with HCl or POCl3 to give the imidazobenzimidazoles III.
IT **21431-82-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)
RN 21431-82-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl- (8CI, 9CI) (CA INDEX NAME)



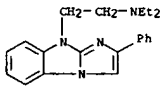
L4 ANSWER 120 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:156175 HCAPLUS
DOCUMENT NUMBER: 82:156175
TITLE: 10π Electrons aromatic systems derived from 3a-azapentaalene. XVI. Benzimidazo[1,2-a]benzimidazole series
AUTHOR(S): De Mendoza, J.; Elguero, J.
CORPORATE SOURCE: Fac. Pharm., Univ. Barcelona, Barcelona, Spain
SOURCE: Bulletin de la Societe Chimique de France (1974), (12, Pt. 2), 2987-8
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: French
GI For diagram(s), see printed CA Issue.
AB Benzimidazo[1,2-a]benzimidazole (I) and its 1-methyl derivative were obtained by photolysing 2-(1-benzotriazolyl)benzimidazole and its 1-methyl derivative The salts II (R = R1 = Me, X = iodo; RR1 = (CH2)3, (CH2)4, X = Br) were obtained by alkylating I.
IT **28890-99-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and alkylation of)
RN 28890-99-5 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 121 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:140013 HCAPLUS
DOCUMENT NUMBER: 82:140013
TITLE: New synthesis of imidazo[1,2-a]benzimidazole derivatives
AUTHOR(S): Koshchienko, Yu. V.; Suvorova, G. M.; Simonov, A. M.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1975), (1), 140-1
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB The iminobenzimidazole I cyclized with RCOCH2Br (R = Me, Ph) in DMF at 80-90° to give the title compds. II in 58 and 61% yields, resp.
IT **55558-59-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 55558-59-3 HCAPLUS
CN Ethanone, 1-(9-methyl-3-phenyl-9H-imidazo[1,2-a]benzimidazol-2-yl)- (9CI) (CA INDEX NAME)

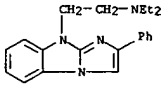


L4 ANSWER 122 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:118900 HCAPLUS
DOCUMENT NUMBER: 82:118900
TITLE: Effect of some benzimidazole and quinoxaline derivatives on bulbar mechanisms of regional circulation regulation
AUTHOR(S): Tyurenkov, I. N.
CORPORATE SOURCE: Volgograd. Med. Inst., Volgograd, USSR
SOURCE: Mater., Povolzh. Konf. Fiziol. Uchastiem Biokhim., Farmakol. Morfol., 6th (1973), Volume 2, 63-4. Editor(s): Anikin, G. D. Chuv. Gos. Univ.: Cheboksary, USSR.
CODEN: 29IZA6
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB When administered to cats at 5 mg/kg before elec. stimulation of the bulbar structures, the preparation RU 13 [**23572-32-9**], a benzimidazole derivative, decreased the neurogenic vascular tonus in the hind limb by 50-60% and that in the small intestine by 25%; systemic arterial pressure was decreased by 35%. The preparation RU 25 [54381-23-6], a quinoxaline derivative, at 5 mg/kg decreased the perfusion pressure in the hind limb by 45% and that in the intestinal vessels by 10%; systemic arterial pressure was decreased by 25%. The preparation RU 30 [54381-22-5], also a quinoxaline derivative, at 5 mg/kg decreased the systemic arterial pressure and the vascular tonus in the limb and intestine by 40-50%.
IT **23572-32-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(blood pressure regulation by medulla oblongata response to)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



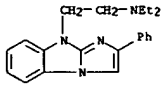
●2 HCl

L4 ANSWER 123 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:80662 HCAPLUS
DOCUMENT NUMBER: 82:80662
TITLE: Action of some new benzimidazole derivatives during experimental anemic hypertension
AUTHOR(S): Pan'shina, M. V.
CORPORATE SOURCE: Volgograd. Med. Inst., Volgograd, USSR
SOURCE: Mater., Povolzh. Konf. Fiziol. Uchastiem Biokhim., Farmakol. Morfol., 6th (1973), Volume 2, 49. Editor(s): Anikin, G. D. Chuv. Gos. Univ.: Cheboksary, USSR.
CODEN: 29IZA6
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB When administered to dogs with anemic hypertension in 15-18 s.c. injections for 2.5-3 weeks, the preparation RU-13 [**23572-32-9**], a benzimidazole derivative, significantly decreased the arterial pressure. Dibazole [621-72-7] (10 mg/kg, s.c.) produced a similar effect after 24-36 injections during a 4-6 week period.
IT **23572-32-9**
RL: BIOL (Biological study)
(antihypertensive)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

L4 ANSWER 124 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:361 HCAPLUS
DOCUMENT NUMBER: 82:361
TITLE: Central vasomotor action of dibazole and its imidazo analog
AUTHOR(S): Kovalev, G. V.; Morozov, I. S.; Tyurenkov, I. N.
CORPORATE SOURCE: Volgograd. Med. Inst., Volgograd, USSR
SOURCE: Farmakologiya i Toksikologiya (Moscow) (1974), 37(5), 558-62
CODEN: FATOAO; ISSN: 0014-8318
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB In expts., on decerebrate, anesthetized, spinal, and curarized cats, dibazole [621-72-7] was shown to have a central component in its mechanism of vasomotor action. The imidazo analog PY-13 [9-(β-diethylaminoethyl)-2-phenylimidazo[1,2-a]benzimadazole-2HCl] (I) [23572-32-9], inhibited the central component at 0.2-1 mg/kg and at 5-15 mg/kg also showed weak ganglion blocking and adrenolytic activity. Small doses of I showed different inhibitory effects on the mechanisms regulating neurogenic toxicity in blood vessels of the small intestines, kidneys, and hind limbs.
IT 23572-32-9
RL: BIOL (Biological study)
(blood vessel response to, central nervous system in regulation of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

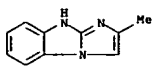


●2 HCl

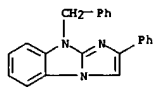
L4 ANSWER 125 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1974:133437 HCAPLUS
DOCUMENT NUMBER: 80:133437
TITLE: 2-Methylimidazo [1,2-a]benzimidazole derivatives
INVENTOR(S): Simonov, A. M.; Tkachenko, P. V.; Popov, I. I.
PATENT ASSIGNEE(S): Rostov State University
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1974, 57(5), 85.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 414260	T	19740205	SU 1972-1742359	19720128
PRIORITY APPLN. INFO.:			SU 1972-1742359 A	19720128

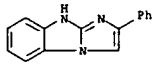
GI For diagram(s), see printed CA Issue.
AB Imidazobenzimidazoles I (R =alkyl, aryl, alkynyl) were prepared by condensing the resp. N-substituted 2-aminobenzimidazoles with HC.tplbond.CCH2Br in an organic solvent and then treating with aqueous NH3 and
then a strong base.
IT 30645-56-8DP, 9H-Imidazo[1,2-a]benzimidazole, 2-methyl-, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 30645-56-8 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-methyl- (8CI, 9CI) (CA INDEX NAME)



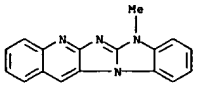
L4 ANSWER 126 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:505140 HCAPLUS
DOCUMENT NUMBER: 79:105140
TITLE: Imidazo[1.2-a]benzimidazole derivatives. VII. Debenzylation of 9-benzyl-2-phenyl(methyl)imidazo[1,2-a]benzimidazole
AUTHOR(S): Anisimova, V. A.; Simonov, A. M.; Borisova, T. A.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1973), (6), 791-6
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Debenzylation of benzimidazole (I; R = CH2Ph, R1 = Ph) with Na in liquid NH3 gave 30% imidazole (I; R = H, R1 = Ph) and 26% dihydro derivative (II; R = H).
Alkylation of II by MeI in the presence of NaNH2 gave quant. Me derivative (II; R = Me); alkylation in EtOH gave 70% methiodide which was treated with NaHCO3 to yield 60% Me derivative (III). Debenzylation of I (R = CH2Ph,
R1 = Me) gave quant. benzimidazole (IV).
IT 21431-84-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(debenzylation of, by sodium in liquid ammonia)
RN 21431-84-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-(phenylmethyl)- (9CI) (CA INDEX NAME)



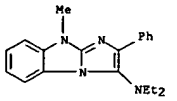
L4 ANSWER 127 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:492108 HCAPLUS
DOCUMENT NUMBER: 79:92108
TITLE: Imidazo[1,2-a]benzimidazole derivatives. VIII. 1H- and 1-methyl-2phenylimidazo[1,2-a]benzimidazoles and their reactivity
AUTHOR(S): Anisimova, V. A.; Simonov, A. M.; Pozharskii, A. F.
CORPORATE SOURCE: Nauchno-Issled. Inst. Fiz. Org. Khim., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1973), (6), 797-802
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Treatment of 2-aminobenzimidazole with PhCOCH2Br in Me2CO gave 41% diphenacyl derivative (I) and 56% monophenacyl derivative (II).
Cyclization of I
in boiling HCl yielded quant. the imidazobenzimidazole (III). Analogously II afforded 91% IV.
IT 23085-25-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



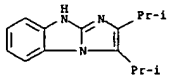
L4 ANSWER 128 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:492104 HCAPLUS
DOCUMENT NUMBER: 79:92104
TITLE: Imidazo[1,2-a]benzimidazole derivatives. IX. Compounds of the 2-oxo-2,3-dihydroimidazo[1,2-a]benzimidazole series and their transformations
AUTHOR(S): Borisova, T. A.; Simonov, A. M.; Anisimova, V. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1973), (6), 803-6
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Hydrolysis of imidazobenzimidazole (I; R = Me) by HCl yielded 92% benzimidazole (II; X = NH.HCl), which was nitrosated by NaNO2 to give 15% II (X = NNO). Basic hydrolysis of I afforded the keto acid (II; X = O). Oxidation of I by KMnO4 gave azo derivative (III). 3-Arylideneimidazobenzimidazoles (IV; X = p-O2NC6H4CH, 5-nitro-2-furylidene, o-O2NC6H4CH; R = Me, PhCH2) were prepared in 62-76% yields by condensation of I with the appropriate aldehyde.
IT **43182-01-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 43182-01-0 HCAPLUS
CN 7H-Benzimidazo[1',2':1,2]imidazo[4,5-b]quinoline, 7-methyl- (9CI) (CA INDEX NAME)



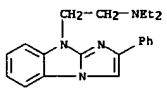
L4 ANSWER 129 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:466246 HCAPLUS
DOCUMENT NUMBER: 79:66246
TITLE: Benzimidazoles and related compounds. V. Reaction of 2-azido-1-methylbenzimidazole with unsaturated compounds
AUTHOR(S): Shiokawa, Youichi; Ohki, Sadao
CORPORATE SOURCE: Tokyo Coll. Pharm., Tokyo, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1973), 21(5), 981-8
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Cycloaddn. reactions of 2-azido-1-methylbenzimidazole (I) with Ph2C:CO (II), MeO2CC.tplbond.CCO2Me (III), CH.tplbond.CCO2Me (IV), and N,N-diethylphenylethynylamine (V) were investigated. III reacted with the carbon-nitrogen double bond of the imidazole ring to give the 1:1 molar adduct VI. V added to the azido group at the C-2 position and VII was obtained. Reaction of I with IV gave a mixture of VIII as the major product and the 1:1 molar adduct IX. II exothermically reacted with I and gave 2,3-dihydro-9-methyl-3-oxo-2,2-diphenyl-9H-imidazo[1,2-a]benzimidazole (X).
IT **43002-82-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 43002-82-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazol-3-amine, N,N-diethyl-9-methyl-2-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 130 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:460988 HCAPLUS
DOCUMENT NUMBER: 79:60988
TITLE: Complexes of 2,3-diisopropyl-1H-imidazo[1,2-a]benzimidazole with cobalt(II) and nickel(II) chlorides
AUTHOR(S): Dziomko, V. M.; Ivashchenko, A. V.
CORPORATE SOURCE: USSR
SOURCE: Zhurnal Obshchei Khimii (1973), 43(6), 1330-3
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB 2,3-Diisopropyl-1H-imidazo[1,2-a]benzimidazole (L) reacts with NiCl2 or CoCl2 in C6H6 to give NiL2Cl2 or CoL2Cl2, resp. The ir bands of NH groups in the complexes show shifts indicating intramol. H bonding between the NH of the ligand and the chloro group forming a 6-atom ring. POCl3 and Et3N converted 4,5-diisopropyl-4-oxazolin-2-one to 2-chloro-4,5-diisopropyloxazole, which with o-C6H4(NH2)2 in hot xylene gave L.
IT **42183-30-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 42183-30-2 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2,3-bis(1-methylethyl)- (9CI) (CA INDEX NAME)

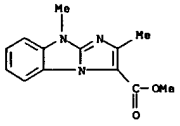


L4 ANSWER 131 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:154693 HCAPLUS
DOCUMENT NUMBER: 78:154693
TITLE: Relation between the chemical structure and the hypotensive activity of new benzimidazole and quinoxaline derivatives
AUTHOR(S): Kovalev, G. V.; Gofman, S. M.; Ivanovskaya, S. V.; Pan'shina, M. V.; Petrov, V. I.; Simonov, A. M.; Tyurenkov, I. N.
CORPORATE SOURCE: Volgogr. Med. Inst., Volgograd, USSR
SOURCE: Farmakologiya i Toksikologiya (Moscow) (1973), 36(2), 232-8
CODEN: FATOAO; ISSN: 0014-8318
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB 9-(β-Diethylaminoethyl)-2-phenylimidazo[1,2-a]benzimidazole-2HCl (I) [23572-32-9] was the strongest hypotensive agent of 8 imidazo(1,2-a)benzimidazole derivs. tested in normal rats and cats and was comparable in potency to imidazo[1,2-a]quinoxaline (II) [235-05-2] and 7-methoxyimidazo[1,2-a]quinoxaline [39744-68-8]. II and its methoxy derivative were, however, less toxic than I in mice. The hypotensive action of I and II was 3-10 times stronger and 10-50 times longer in duration than that of dibazole [621-72-7]. I (10 mg/kg, s.c., or 20 mg/kg, oral) administered daily for 1 month normalized blood pressure in rabbits and dogs with pituitrin- or ischemia-induced hypertension. Allyl- and propargylbenzimidazole derivs. did not affect blood pressure.
IT **23572-32-9**
RL: BIOL (Biological study)
(hypotension from)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

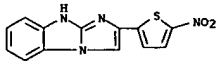


●2 HCl

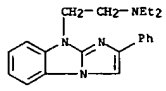
L4 ANSWER 132 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:97556 HCAPLUS
DOCUMENT NUMBER: 78:97556
TITLE: Imidazo[1,2-a]benzimidazole derivatives. VI. Preparation of imidazo[1,2-a]benzimidazole derivatives from 1-alkyl- or 1-aralkyl-2-iminobenzimidazoline-3-acetic acids and their esters
AUTHOR(S): Simonov, A. M.; Anisimova, V. A.; Borisova, T. A.
CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1973), (1), 111-14
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Imidazo[1,2-a]-benzimidazole derivs. (I; R = Me, PhCH2, R1 = H) were prepared in .apprx.90% yields by acetylation of benzimidazoleacetic acids (II, R = Me, PhCH2; R2 = Me) with Ac2O to give acetylimino derivs. which were cyclodehydrated by further treatment with Ac2O to yield 82-9% imidazobenzimidazolecarboxylates, which were then decarboxylated by HCl. Treatment of I with Ac2O for 3-5 min gave 85-90% ketones (III; R = Me, PhCH2). Ketone (III; R = Me) treated with Ac2O for 3 hr gave 87% acetyl derivative I (R = Me, R2 = Ac).
IT **40783-82-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 40783-82-2 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-3-carboxylic acid, 2,9-dimethyl-, methyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 133 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:4212 HCAPLUS
DOCUMENT NUMBER: 78:4212
TITLE: Synthesis of nitroheterocycles. I. Synthesis of 2-substituted 5-nitrothiophene derivatives and their antimicrobial activity
AUTHOR(S): Arya, V. P.; Fernandes, F.; Sudarsanam, V.
CORPORATE SOURCE: CIBA Res. Cent., Bombay, India
SOURCE: Indian Journal of Chemistry (1972), 10(6), 598-601
CODEN: IJOCAP; ISSN: 0019-5103
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 2-Acetylthiophene was nitrated to give 2-acetyl-5-nitrothiophene which on bromination affords the corresponding 2-bromoacetyl derivative 2-Bromoacetyl
derivative reacts with guanylthiourea, imidazolidine-2-thione or 3,4,5,6-tetrahydropyrimidine-2-thiol to give the corresponding thiazole, imidazo[2,1-b]thiazole and thiazolo[3,2-a]pyrimidine derivs. When 2-bromoacetyl derivative is reacted with heterocyclic amines like 2-aminopyridine or 2-aminopyrimidine, it forms imidazo[1.2-a]pyridine and imidazo[1.2-a]pyrimidine derivs. resp. A number of condensed imidazoles, e.g. imidazo[1.2-c]pyrimidine, imidazo[1.2-b]pyridazine, imidazo[2,1-b]-1.3,4-thiadiazole, imidazo[2,1-b]benzothiazole, imidazo[1,2-a]benzimidazole, imidazo[1.2-b]indazole and imidazo[1.2-a]-1.8-naphthyridine derivs. were prepared from appropriate amines. The antimicrobial activity of these compds. is also described.
IT **39565-22-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 39565-22-5 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-(5-nitro-2-thienyl)- (9CI) (CA INDEX NAME)

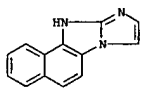


L4 ANSWER 134 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:560002 HCAPLUS
DOCUMENT NUMBER: 77:160002
TITLE: Heterocyclic compounds. 10. Synthesis of some imidazo[1,2-a]benzimidazoles with potent analgetic activities
AUTHOR(S): Ogura, Haruo; Takayanagi, Hiroaki; Yamazaki, Yukio; Yonezawa, Shoichi; Takagi, Hiromu; Kobayashi, Shinsaku; Kamioka, Toshiharu; Kamoshita, Katuo
CORPORATE SOURCE: Sch. Pharm. Sci., Kitasato Univ., Tokyo, Japan
SOURCE: Journal of Medicinal Chemistry (1972), 15(9), 923-6
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 77:160002
AB The most potent analgetic of a series of imidazo[1,2-a]benzimidazoles synthesized was 2-(p-bromphenyl)-9-[3-(dimethylamino)propyl]-9H-imidazo[1,2-a]benzimidazole (I) [**36994-25-9**], which had oral ED50 and LD50 values in mice of 6 and 1,100 mg/kg, resp. To synthesize I, 2-aminobenzimidazole was reacted with p-bromophenyl Me ketone in MeOH and the product 1-phenacylbenzimidazole separated from the 1,3-bis(phenacyl)benzimidazole by fractional crystallization The product was then
cyclized in NaOH to the imidazobenzimidazole, which was treated with NaNH2 in liquid NH3 and then with 3-(dimethylamino)propyl chloride in dry toluene to yield I.
IT **23572-32-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analgesic activity of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

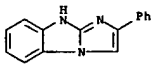


●2 HCl

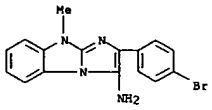
L4 ANSWER 135 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:419576 HCAPLUS
DOCUMENT NUMBER: 77:19576
TITLE: Imidazoles. LX. Synthesis of 1H-naphth[1,2-d]imidazo[3,2-b]imidazole
AUTHOR(S): Povstyanoi, M. V.; Kochergin, P. M.
CORPORATE SOURCE: Zaporozh. Gos. Med. Inst., Zaporozhe, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1971), 7(8), 1121-4
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB 2-Chloro-3-acylalkylnaphth[1,2-d]imidazole (I, X = Cl; R2 = H or Me; and R1 = CMe3, Ph, MeC6H4, MeOC6H4, ClC6H4, or BrC6H4) react with NH3, primary amines, amino alcs., dialkylaminoalkylamines, or α-amino acid esters in DMF or alcs. at 110-85° (MeOH and EtOH require an autoclave) to give 1H-naphth[1,2-d]imidazo-[3,2-b]imidazole (II) by the replacement of Cl with the amino group followed by cyclization. Sixty compds. were prepared The reaction products of I and amino alcs. were dehydrated to give the vinyl derivs.
IT **36759-83-8DP**, 10H-Imidazo[1,2-a]naphth[1,2-d]imidazole, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36759-83-8 HCAPLUS
CN 10H-Imidazo[1,2-a]naphth[1,2-d]imidazole (9CI) (CA INDEX NAME)



L4 ANSWER 136 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:140650 HCAPLUS
DOCUMENT NUMBER: 76:140650
TITLE: Imidazoles. LXX. Synthesis of derivatives of 1(9)H- and 1H-imidazo[1,2-a]benzimidazoles
AUTHOR(S): Ponomar, V. S.; Kochergin, P. M.
CORPORATE SOURCE: Zaporozh. Med. Inst., Zaporozhe, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1972), (2), 253-6
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB I (R1 = H, alkyl, aryl, R2 = alkyl, aryl, R = H, alkyl) were prepared (34-93%) by heating 1-acylmethyl-2-chlorobenzimidazoles with an amine at 140-80° in MeOH or HCONMe2.
IT **23085-25-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 137 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:126866 HCAPLUS
DOCUMENT NUMBER: 76:126866
TITLE: Imidazo[1,2-a]benzimidazole derivatives. V. 3-Amino derivatives of 2,9-substituted imidazo[1,2-a]benzimidazole
AUTHOR(S): Simonov, A. M.; Anisimova, V. A.
CORPORATE SOURCE: Rostov.-na-Donu Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1971), 7(5), 673-7
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Reduction of 3-nitro (or nitroso) derivs. of 2,9-substituted imidazo[1,2-a]benzimidazoles (I, R = Me, Ph, p-BrC6H4, R1 = Me, Et, PhCH2; R2 = H, Me, X = NO2, NO) with SnCl2 in HCl led via the unstable 3-amino derivs. I (X = NH2) and 2-(α-cyanobenzylamino)benzimidazole (II, R = Ph, X = CN) (III), to 2-(α-carboxylbenzylamino)benzimidazoles (II, R = Ph, X = CO2H). III was a tautomer of I (X = NH2) its reactions with PhCHO, p-O2NC6H4CHO, and Ac2O gave I (X = N:CHPh, N:CHC6H4NO2-p, and NHAc resp.). The only stable amines I (X = NH2) were those in which R = Me. III (R1 = Me, R2 = H) (IV) was prepared in 89% yield from a mixture of equimolar amts. of PhCHO, NaHSO3, and 1-methyl-2-aminobenzimidazole in boiling H2O treated with a two-fold molar excess of NaCN. A mixture of IV with a slight molar excess of PhCHO kept, for a short time, at 130°, gave I (R = Ph, R1 = Me, R2 = H, X = N:CHPh). Nitrosation of I (R = Ph, R1 = Et, R2 = Me, X = H) in AcOH with an aqueous solution of NaNO2 afforded the corresponding I (X = NO).
IT **35681-45-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of)
RN 35681-45-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazol-3-amine, 2-(4-bromophenyl)-9-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

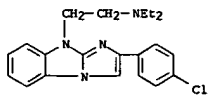


● HCl

L4 ANSWER 138 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:85816 HCAPLUS
DOCUMENT NUMBER: 76:85816
TITLE: 2-(p-Halophenyl)-9-(dialkylaminoalkyl)imidazo[1,2-a]benzimidazoles
INVENTOR(S): Haruo, Ogura; Itoh, Tsuneo; Takayanagi, Hiroaki; Yamzaki, Yukio; Takagi, Hiromu
PATENT ASSIGNEE(S): Sankyo Co., Ltd.
SOURCE: Ger. Offen., 21 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

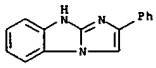
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2131330	A	19720105	DE 1971-2131330	19710621
JP 49004235	B4	19740131	JP 1970-54600	19700623
JP 49004236	B4	19740131	JP 1970-55791	19700626
US 3732243	A	19730508	US 1971-154214	19710617
CA 940134	A1	19740115	CA 1971-116068	19710618
FR 2100813	A5	19720324	FR 1971-22615	19710622
FR 2100813	B1	19741018		
GB 1316894	A	19730516	GB 1971-29478	19710623
PRIORITY APPLN. INFO.:			JP 1970-54600 A	19700623
			JP 1970-55791 A	19700626

GI For diagram(s), see printed CA Issue.
AB The title compds. (I, X = (CH2)nNR2; Y = Cl, Br; n = 2, 3; R = Me, Et) and their hydrobromides and hydrochlorides, used as analgesics and psychotropic pharmaceuticals, were prepared by intramol. condensing an imidazole II or by reaction of I (X = H) with Cl(CH2)nNR2. Thus, II.HBr (n = 2, R = Et, Y = Cl) was heated 10 min at 190-200° on an oil bath to give 75% I.HBr (X = CH2CH2NEt2, Y = Cl). Dissolving I (X = H, Y = Cl) and NaNH2 in NH3(l), evaporation of NH3 at .apprx.20°, dissolving the residue in toluene, addition of ClCH2CH2NEt2, heating 1 hr at 90°, keeping .apprx.12 hr, and passing HCl(g) into the mixture gave 68% I.HCl (X = CH2CH2NEt2, Y = Cl). Similarly prepared were 5 other I. I (X = CH2CH2CH2NMe2, Y = Br) had orally ED50 and LD50 of 6 and 1100 mg/kg, resp.
IT **35222-34-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 35222-34-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, 2-(4-chlorophenyl)-N,N-diethyl-, hydrobromide (9CI) (CA INDEX NAME)

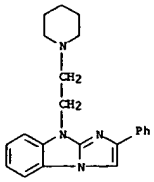


●x HBr

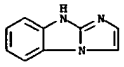
L4 ANSWER 139 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:3757 HCAPLUS
DOCUMENT NUMBER: 76:3757
TITLE: Synthesis and absorption spectra of imidazo[1,2-a]benzimidazole derivatives
AUTHOR(S): Ponomar, V. S.; Kas'yanenko, N. G.
CORPORATE SOURCE: USSR
SOURCE: Khim. Issled. Farm. (1970) 52-3
From: Ref. Zh., Khim. 1970, Abstr. No. 23Zh422
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Heating of 1-phenacyl-2-chlorobenzimidazole with alc. NH3 or RNH2 gave I (R1 = H or R, resp.). The uv spectra of I were studied in neutral, acid, or alkaline solution
IT **23085-25-8D**, 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl-, derivs.
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of derivs. and uv spectra)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



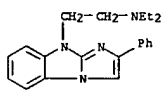
L4 ANSWER 140 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:447311 HCAPLUS
DOCUMENT NUMBER: 75:47311
TITLE: Effect of some new benzimidazole derivatives on the control nervous system
AUTHOR(S): Ivanovskaya, S. V.
CORPORATE SOURCE: USSR
SOURCE: Sb. Nauch. Rab., Volgograd. Gos. Med. Inst. (1969), 22, 139-41
CODEN: SNVMBP
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Pharmacol. effects of the benzimidazole derivs. (I, II, and III) were studied. I had a well-expressed depressive action on the central nervous system. II provoked a weak sedative effect, but was able to significantly intensify the anesthetic efficiency of morphine. III had a stimulating effect on the central nervous system. None of the prepns. had any antispasmatic effect, and they were unable to inhibit spasms produced in mice by strychnine and camphor.
IT **23572-33-0**
RL: BIOL (Biological study)
(nervous system blocking by)
RN 23572-33-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-phenyl-9-[2-(1-piperidinyl)ethyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 141 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:447283 HCAPLUS
DOCUMENT NUMBER: 75:47283
TITLE: Pharmacotherapy of experimental pituitrin hypertonia in rabbits and dogs by imidazo[1,2-a]benzimidazole derivatives
AUTHOR(S): Ivanovskaya, S. V.
CORPORATE SOURCE: USSR
SOURCE: Sb. Nauch. Rab., Volgograd. Gos. Med. Inst. (1970), 23, 228-31
CODEN: SNVMBP
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Exptl. hypertonia was induced in rabbits and dogs by treatment with pituitrin for 25-30 days. Daily administration for 15-30 days of 10 mg/kg of any of the three imidazo[1,2-a]benzimidazoles studied, returned blood pressure to normal. The drugs worked more rapidly in dogs than in rabbits and oral administration was less effective than treatment by s.c. injection.
IT **247-79-0D**, 1H-Imidazo[1,2-a]benzimidazole, derivs.
RL: BIOL (Biological study)
(hypertension lowering by)
RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)

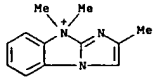


L4 ANSWER 142 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:433574 HCAPLUS
DOCUMENT NUMBER: 75:33574
TITLE: Comparative pharmacological characteristics of new benzimidazole derivatives
AUTHOR(S): Ivanovskaya, S. V.
CORPORATE SOURCE: USSR
SOURCE: Sb. Nauch. Rab., Volgograd. Gos. Med. Inst. (1969), 22, 142-5
CODEN: SNVMBP
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Three benzimidazole derivs. (I, II, and III) were studied. For toxicity detns. in mice, the prepns. were administered i.p. in increasing doses. The animals showed a general depression and clonic spasms. II had the lowest toxicity, with an LD50 of 128 mg/kg body weight The LD50 for I was 116 mg/kg and that for III was 91 mg/kg. A hypotensive effect was shown by all 3 prepns. The strongest lowering of the blood pressure was effected by III, but the longest duration of the effect was with I. The blocking of sympathetic ganglions by I and II lasted longer than the action on parasympathetic ganglions. However, the duration of the ganglioblocking action was shorter than the duration of hypotensive action.
IT **23572-32-9**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacology of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

L4 ANSWER 143 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:76372 HCAPLUS
DOCUMENT NUMBER: 74:76372
TITLE: Imidazo[1,2-a]benzimidazole derivatives. III. Reactions of 3-nitroso derivatives
AUTHOR(S): Simonov, A. M.; Anisimova, V. A.; Chub, N. K.
CORPORATE SOURCE: Rostov.-na-Donu Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1970), (7), 977-80
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB A mixture of I(R = Me, R1 = H)·MeI and 10% KOH was heated 2 hr on a boiling water bath to give 80% II (R = CH2Ac, X = NMe) which was also obtained from 1-methyl-2-(methylamino)benzimidazole and MeCOCH2Br. A solution of I (R = Ph, R1 = H) in AcOH was treated with vigorous stirring dropwise at 20° with aqueous NaNO2 to give 92% I (R = Ph, R1 = NO) (III), m. 247°. A suspension of III in EtOH containing NaOH was refluxed 15 min and acidified to pH 5-6 to give 47% II [R = C(:NOH)COPh, X = O](α-monoxime). From the mother-liquor was isolated after acidification to pH 1 37.5% II [R = C (:NOH)COPh, X = NH] (IV). A solution of IV in 10% KOH was refluxed 2.5 hr to give II [R = C(:NOH)COPh, X = O](β-monoxime). I (R = Me, R1 = H) in EtOH was treated with HCl and, while cooled, with aqueous NaNO2 to give 80% II [R = C(:NOH)COMe, X = NH]·HCl, m. 196-7°. To a suspension of III in EtOH was added PhCH2CN and 5% NaOH and the whole refluxed 30 min to give 50% I [R = Ph, R1 = N:C(CN)Ph]. A mixture of III and p-aminobenzoic acid in AcOH was refluxed 2 hr give 57% I (R = Ph, R1 = N:NC6H4CO2-H-p).
IT **30770-30-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 30770-30-0 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazolium, 2,9,9-trimethyl-, iodide (8CI) (CA INDEX NAME)

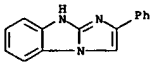


●I⁻

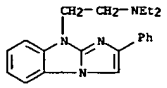
L4 ANSWER 144 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:53787 HCAPLUS
DOCUMENT NUMBER: 74:53787
TITLE: Antibiotic and antiviral 1-phenacyl-2-aminobenzimidazoles and 1,3-diphenacyl-2-iminobenzimidazolines
INVENTOR(S): Ogura, Haruo
SOURCE: Ger. Offen., 21 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2003825	A	19701210	DE 1970-2003825	19700128
JP 48042875	B4	19731214	JP 1969-5977	19690129
FR 2034505	A5	19701211	FR 1970-2999	19700128
CH 529768	A	19721031	CH 1970-529768	19700128
GB 1295478	A	19721108	GB 1970-1295478	19700128

PRIORITY APPLN. INFO.: JP 1969-5977 A 19690129
GI For diagram(s), see printed CA Issue.
AB The antibiotic and antiviral title compds. (I and II) were prepared from 2-aminobenzimidazole (III) with BrCH2COC6H4R-p. Cyclization of I gave the imidazo-benzimidazole IV, cyclization of II the 9-phenacyl derivative of IV. Thus, reaction of III with BrCH2Bz 10 days at room temperature gave II and from the filtrate I (R = H), which on refluxing with methanolic NaOH gave IV (R = H).
IT 23085-25-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



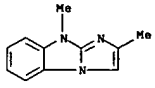
L4 ANSWER 145 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:51876 HCAPLUS
DOCUMENT NUMBER: 74:51876
TITLE: Pharmacology of new benzimidazole derivatives
AUTHOR(S): Ivanovskaya, S. V.
CORPORATE SOURCE: USSR
SOURCE: Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1968), 21(2), 175-8
CODEN: TVLMB8; ISSN: 0376-141X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB The LD50 of dichlorohydrate of 9-diethylaminoethyl-2-phenylimidazolo[1,2-a]benzimidazole (I) after i.p. injection in mice was 116 mg/kg; 30 mg/kg was sufficient to decrease the motor activity. In 24 cats anesthetized by Nembutal, 10 mg of I/kg had 2-2.5 hr of hypotensive effects and caused a more prolonged depression of parasympathetic and sympathetic ganglia. I (20 mg/kg) caused death by stopping respiration and by a sudden drop in the blood pressure. I decreased the contractions of isolated frog heart. In mice, I potentiated the effect of chloral hydrate or amobarbital.
IT 23572-32-9
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacology of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

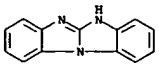
L4 ANSWER 146 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1970:509739 HCAPLUS
DOCUMENT NUMBER: 73:109739
TITLE: Imidazo[1,2-a]benzimidazole derivatives. II. Aldehydes and stycyl derivatives of imidazo[1,2-a]benzimidazole
AUTHOR(S): Simonov, A. M.; Anisimova, V. A.; Grushina, L. E.
CORPORATE SOURCE: Rostov.-na-Donu Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1970), (6), 838-41
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB A hot EtOH soln of 1-methyl-2-aminobenzimidazole was mixed with MeCOCH2Br to give 85.5% 1-methyl-3-acetonyl-2-aminobenzimidazoline- HBr (I), m. 287° (decomposition); free base (II) m. 110-11°. II cyclized slowly to give III (R = Me) (IV), m. 94°; HCl salt (V) m. 200° (decomposition). V was obtained in 88% yield by 2-hr reflux of I or II in concentrated HCl. IV in Me2NCHO and POCl3 gave 70% VI (R = Me) (VII), m. 186°; 2,4-dinitrophenylhydrazone m. 288°; oxime m. 265°; MeI salt m. 246-7°. Similarly was obtained in 88% yield VI (R = Ph) (VIII), m. 147°; 2,4-dinitrophenylhydrazone m. 304°; oxime m. 235°; MeI salt m. 232-3° (decomposition). VII, hippuric acid, fused AcONa, and Ac2O gave 62% 2-phenyl-4-(2,9-dimethylimidazo[1,2-a]benzimidazol-3-ylmethylene)oxazol-5- one, m. 252.5°. Similarly was obtained from VIII in 24% yield 2-phenyl-4-(9-methyl-2-phenylimidazo[1,2-a]benzimidazol-3-ylmethylene)oxazol-5-one, m. 252°. A mixture VIII, anhydrous AcONH4, and MeNO2 was refluxed to give, after chromatog., 47% 3-(β-nitrovinyl)-9-methyl-2-phenylimidazo[1,2-a]benzimidazole, m. 189-9.5°. IV in aqueous KMnO4 yielded 1,1'-dimethyl-2,2'-azobenzimidazole, m. 283-4°. Heating IV with aldehydes at 65-100° for 5-10 min gave III (R, m.p., and % yield given): CH:CHPh, 215°, 90; CH:CHC6H4NO2-p, 221° (decomposition), 71.5; CH:CHC6H4OH-o, 297°, 98; CH:CHC6H3(OH)2-2,4, 307°, 41; CH:CHC6H4NMe2-p, 282°, 63. Reflux of VI with appropriate amines in EtOH gave the following IX (R, R1, m.p., time of reflux in hr, and % yield given): Me, C6H4OH-o, 292° (decomposition), 2, 83; Ph, C6H4OH-o, 245° (decomposition), 10, 38; Me, C6H4NO2-p, 142° (with 1 H2O), 3, 98. IX (R = R1 = Ph, C6H4NO2-p), m. 230°, was obtained in 76% yield by melting 5 hr at 150°. Some uv spectra are given and discussed.
IT 28992-70-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 28992-70-3 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2,9-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 146 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

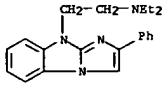


● HCl

L4 ANSWER 147 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1970:509737 HCAPLUS
DOCUMENT NUMBER: 73:109737
TITLE: Thermolysis and photolysis of 1-benzotriazolyl derivatives
AUTHOR(S): Hubert, Andre J.; Reimlinger, Hans
CORPORATE SOURCE: Union Carbide Eur. Res. Assoc., Brussels, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1970), 103(9), 2828-35
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB Reaction of benzotriazole with RCl or 1-(R-substituted)-2-chlorobenzimidazoles gave 10-80% 1-(R-substituted)benzotriazoles (I) (R = 1,2-benzisothiazol-3-yl, s-triazolo-[1,5-a]pyrimidin-7-yl (Ia); s-triazolo[3,4-a]isoquinolin-3-yl (Ib), 2-pyrimidinyl (Ic), 3-methyl-2-pyridyl, 4-oxo-9-methyl-4H- pyrido[1,2-a]pyrimidin-2-yl, 2,4-dichloro-s-triazin-6-yl, 3-methoxy-6-pyridazinyl (Id), 3-phenyl-1,2,4-oxadiazol-5-yl, and 4-thieno[3,2-c]pyridyl) or 50-60% 1-(R-substituted)-2-(1-benzotriazolyl)benzimidazoles (II) (R = H, Me, or PhCH2), resp. Photolysis of II 30-60 min at 20° gave 25-30% 5-(R-substituted)-benzimidazo[1,2-a]benzimidazoles (III) (R = H, Me, or PhCH2). Photolysis of I gave undefined decomposition products. Thermolysis of Ia-Id in polyphosphoric acid at 140-50° gave 60% s-triazolo[2',3':3,2]pyrimido[1,6-a]benzimidazole (IV), 30% benzimidazo[1',2':1,5]triazolo[3,4-a]isoquinoline (V), 60% pyrimido[1,2-a]benzimidazole (VI), and 50% 2-hydroxypyridazino[1,6-a]benzimidazole (VII), resp.
IT 28890-99-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 28890-99-5 HCAPLUS
CN 5H-Benzimidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



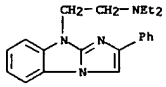
L4 ANSWER 148 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1970:475494 HCAPLUS
DOCUMENT NUMBER: 73:75494
TITLE: Pharmacology of new derivatives of benzimidazole
AUTHOR(S): Ivanovskaya, S. V.
CORPORATE SOURCE: USSR
SOURCE: Sb. Nauch. Rab. Volgograd. Med. Inst. (1968), 21(2), 175-8
From: Ref. Zh., Farmakol., Khimioter. Sredstva. Toksikol. 1969, Abstr. No. 8.54.349
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The pharmacol. properties of 9-diethylaminoethyl-2-phenyl-9H-imidazo[1,2-a]benzimidazole dihydrochloride (I) are studied. LD50 of I for mice i.p. is 116 mg/kg. In narcotized cats I in an optimum dose of 10 mg/kg i.v. lowers the arterial pressure to an average of 44.3 mm Hg in 2-2.5 hr and depresses the activity of parasympathetic and sympathetic ganglia. In a concentration of 10-5M, I abridges the rhythm and somewhat increases the amplitude of systole of the isolated heart of the frog, while in a concentration of 10-3-10-4M it causes cessation of beating. In rats I (20 mg/kg; means of injection not indicated) stops the orientation reaction, while in mice I raises the soporific effect of barbamyl (70 mg/kg) and chloral hydrate (300 mg/kg i.p.). In the hypotensive action of I there is a depressing effect upon the heart and a sedative effect.
IT 23572-32-9
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacology of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

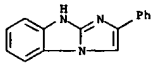
L4 ANSWER 149 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1969:481267 HCAPLUS
DOCUMENT NUMBER: 71:81267
TITLE: Derivatives of imidazo[1,2-a]benzimidazole containing a β-dialkylaminoalkyl group
AUTHOR(S): Simonov, A. M.; Belous, A. A.; Anisimova, V. A.; Ivanovskaya, S. V.
CORPORATE SOURCE: Rostov.-na-Donu Univ., Rostov-on-Don, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1969), 3(1), 7-10
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 71:81267
GI For diagram(s), see printed CA Issue.
AB A solution of 2 g. of BzCH2Br in 9 ml. EtOH and 5-10 drops of concentrated HBr solution was added to a solution of 2.32 g. 2-amino-1-[β-(diethylamino)ethyl]benzimidazole in 6 ml. EtOH and the mixture boiled 5-10 min. and kept overnight to give 79% 2-imino-1-[β-(diethylamino)ethyl]-3-phenacylbenzimidazoline (I) dihydrobromide (II); m. 249° (EtOH). Another 2.15 g. was recovered from the mother liquor by Et2O extraction The following were prepared analogously: 85% 2-imino-1-[β-(1-piperidyl)ethyl]-3-phenacyl-benzimidazoline (III) dihydrobromide, m. 221° (EtOH); 42% 2-imino-1-[β-(diethylamino)ethyl]-3-acetonylbenzimidazoline (IV) dihydrobromide (V), m 200-2° (EtOH-Et2O). V did not precipitate but was recovered by Et2O extraction The addition of excess cold aqueous 22% NH3 to a cold aqueous solution of II gave I, an oil which crystallized on rubbing, m. 78°; III, m. 112° (aqueous EtOH), and IV, an uncrystallizable oil. I, III, and IV all decomposed on standing. II boiled with excess concentrated aqueous HCl 7 hrs., cooled, neutralized with 22% NH3, and extracted with Et2O and the solvent evaporated gave 95% 9-(β-diethylaminoethyl)-2-phenylimidazo[1,2-a-]benzimidazole (VI), a thick oil; dihydrochloride (VII) m. 205-6° (glacial HOAc); dipicrate m. 247° (decomposition) (EtOH). Similarly prepared were: 95% 9-[β-(1-piperidyl)ethyl]-2-phenylimidazo[1,2-a]benzimidazole m. 80-2° [dihydrochloride (VIII) m. 225° (glacial HOAc); dipicrate m. 269° (decomposition) (EtOH-Et2O)]; and 90% 9-[(β-diethylamino)ethyl]-2-methylimidazo[1,2-a]benzimidazole an oil; dihydrochloride (IX), m. 160-2° (EtOH); dipicrate (X) m. 256-8° (absolute EtOH). X is also produced by the action of picric acid on IV. VII, VIII, and IX exhibit hypotensive action in cats; retardation of contraction of isolated frog's heart; depression of parasympathetic and sympathetic nervous systems; and prolongation of the effects of soporifics in white mice.
IT 23572-32-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23572-32-9 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-phenyl-, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 149 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)

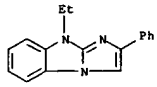


●2 HCl

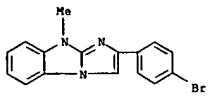
L4 ANSWER 150 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1969:413065 HCAPLUS
DOCUMENT NUMBER: 71:13065
TITLE: Synthesis of condensed imidazole system derivatives from 2-haloimidazoles and 8-haloxanthines
AUTHOR(S): Kochergin, P. M.; Priimenko, B. A.; Ponomar, V. S.; Povstyanoi, M. V.; Tkachenko, A. A.; Mazur, I. A.; Krasovskii, A. N.; Knysh, E. G.; Yurchenko, M. I.
CORPORATE SOURCE: Vses. Nauch.-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1969), (1), 177-8
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB With known methods (F. Kroehnke, et al., 1955; A. Lawson, H. V. Morley, 1957) the following new compds. were obtained: 1-phenacyl-2-bromo-4,5-diphenylimidazole, m. 180-1° (MeOH); 1-phenacyl-2-chlorobenzimidazole, m. 168-70° (MeOH); 3-acetonyl-2-chloronaphth-[1,2-d]imidazole, m. 133-4° (aqueous EtOH); 3-phenacyl-2-chloronaphth[1,2-d]imidazole, m. 200-1° (aqueous MeOH); 1,2,5,6-tetraphenylimidazo[1,2-d]imidazole, m. 252-3° (aqueous MeOH); 2-phenylimidazo[1,2-d]benzimidazole, m. 285-7° (aqueous AcOH); 1-(p - methoxyphenyl) - 2 - phenylnaphth[1,2 - d]imidazo[3, 2 - b]-imidazole, m. 266-7° (EtOH); 2-phenyl-6,8-dimethylimidazo-[1,2-f]xanthine, m. >320°; 2,5,6-triphenyl[2,1-b]thiazole, m. 175-7° (dioxane); 2-phenylthiazolo[3,2-a]benzimidazole, m. 166-7° (aqueous EtOH); 2-methylnaphth[1,2,d]imidazo[3,2-b]thiazole, m. 184-5° (EtOH) (decomposition); 2-phenyl-6,8-dimethylthiazolo-[3,2-f]xanthine, m. 260-1.5° (Me2NCHO).
IT **23085-25-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23085-25-8 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole, 2-phenyl- (8CI, 9CI) (CA INDEX NAME)



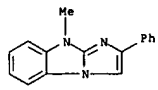
L4 ANSWER 151 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1969:96712 HCAPLUS
DOCUMENT NUMBER: 70:96712
TITLE: Imidazoles. XXIX. Imidazo[1,2-a]benzimidazoles
AUTHOR(S): Kochergin, P. M.; Simonov, A. M.
CORPORATE SOURCE: Vses. Nauch.-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR
SOURCE: Khim. Geterotsikl. Soedin., Sb. 1: Azotsoderzhashchie Geterotsikly (1967), 133-6. Editor(s): Hillers, S. Izd. "Zinatne": Riga, USSR.
CODEN: 20NNA2
DOCUMENT TYPE: Conference
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Ia-e (see table) were prepared by adding 0.01 mole α-halo ketones in 10-20 cc. Me2CO at 30-40° to an equimol. amount of 1-ethyl-2-aminobenzimidazole in 40 cc. Me2CO, refluxing 1-2 hrs., and keeping overnight. IIa-e (see table) were obtained by adding 2-4 cc. of 20-5% aqueous NH3 to 1 g. I in 20-50 cc. hot MeOH, stirring 2-3 min., and pouring in H2O. Imidazo[1,2-a]benzimidazoles (IIIa-e) (see table) were prepared from the corresponding I and (or) II. Thus, 1 g. Ib in 40 cc. 36% HCl or 42% HBr was refluxed for 5 hrs., kept overnight, filtered, the precipitate dissolved in 10 cc. hot MeOH, treated with 1 cc. 40% aqueous NaOH, stirred for 2-4 min., and poured in 50 cc. H2O to give 0.62-0.65 g. IIIb. Refluxing 1.1 g. Ic in 10 cc. 85% HCO2H for 5 hrs., adding 3 cc. of saturated aqueous solution of AcONa, stirring 2-4 min., and pouring into 50-60 cc. H2O yielded 0.75 g. IIIc. Similarly, IIId and IIIe were obtained from Id and Ie, resp. Refluxing 5 g. Ib in 50 cc. POCl3 for 5 hrs., removing the solvent in vacuo, dissolving the residue in H2O, alkalizing the aqueous solution with NaOH, and extracting with CHCl3 gave 99.2% crude IIIb, which was crystallized from Et2O.
Similarly, IIIa was prepared from Ia. Crystallization of IIe from EtOH with 1 drop of AcOH followed by addnl. recrystn. from pure EtOH yielded IIIe.
Similarly, IIIc and IIId were obtained from IIc and IId, resp.
IT **2208-82-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 2208-82-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-ethyl-2-phenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 152 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1969:77868 HCAPLUS
DOCUMENT NUMBER: 70:77868
TITLE: Synthesis and transformation of imidazo[1,2-a]benzimidazole derivatives. I
AUTHOR(S): Simonov, A. M.; Anisimova, V. A.
CORPORATE SOURCE: Rostov.-na-Donu Gos. Univ., Rostov-on-Don, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1968), (6), 1102-4
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB ArCOCH2Br and 1-alkyl-2-aminobenzimidazole gave the following I (R2 = NH) (R1, Ar, % yield, m.p., and m.p. HBr salt given): Me, Ph (II), 99, 146° (aqueous alc.), -; Me, p-BrC6H4, 98, 161° (decomposition) (MeOH), 284-5° (decomposition) (alc.); and CH2Ph, Ph, 98, 170-1° (aqueous alc.), 267-8° (decomposition) (alc.-Et2O). II was refluxed 4 hrs. with excess POCl3 or concentrated HCl to give 91.5% III (R1 = Ph, R2 = H, R3 = Me) (IV), m. 120° (aq.alc.). The following III (R2 = H) were obtained (R1, R3, % yield, and m.p. given): p-BrC6H4, Me, 66, 153° (MeOH); and Ph, CH2Ph, 93.3, 147° (MeOH). IV was methylated with MeI at position 1. KOH (0.25 g.) and 1 g. IV.MeI [m. 234° (decomposition) (alc.)] in 10 cc. 50% alc. was refluxed 1 hr. to give 70% I (R1 = Me, R2 = O, Ar = Ph) (V). 1-Methylbenzimidazolone (VI) and an equimolar amount BzCH2Br was refluxed 10 min. in alc. and worked up to give 64% V, m. 168°; oxime m. 210° (aqueous alc.); picrate m. 182° (decomposition) (alc.). Br (0.005 mole) in CHCl3 was added to 0.005 mole IV in dry CHCl3 over 30 min. at 20° with vigorous stirring and the mixture kept 30 min. to give 98% III.HBr (R1 = Ph, R2 = Br, R3 = Me) (VII.HBr), m. 245°. VII (0.65 g.), m. 148° (alc.), and 0.55 cc. PhSO3Me was heated 30 min. at 80° to give 96% VII methylbenzenesulfonate (VIII), m. 227° (alc.-Et2O). VIII (1.45 g.) was refluxed 30 min. with 5 cc. 10% KOH to give 48.8% VI. VII (0.33 g.), 0.08 g. NaNO2, and 3 cc. HCONMe2 was refluxed 1 hr. to give 80% III (R1 = Ph, R2 = NO2, R3 = Me), m. 205° (alc.-Me2CO). VII (0.5 g.), 0.7 g. piperidine, and 5 cc. HCONMe2 was refluxed 2 hrs. to give 0.47 g. I, (R1 = Ph, R2 = N-piperidino, R3 = Me), m. 134-5° (petroleum ether). Similarly, 90% I (R1 = Ph, R2 = N-morpholino, R3 = Me), m. 212-13° (petroleum ether), was obtained.
IT **21431-83-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 21431-83-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2-(4-bromophenyl)-9-methyl- (9CI) (CA INDEX NAME)

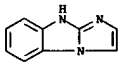


L4 ANSWER 153 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1965:471994 HCAPLUS
DOCUMENT NUMBER: 63:71994
ORIGINAL REFERENCE NO.: 63:13260e-f
TITLE: Synthesis of fused imidazo-heterocyclic systems
AUTHOR(S): Werbel, Leslie M.; Zamora, Maria L.
CORPORATE SOURCE: Parke, Davis & Co., Ann Arbor, MI
SOURCE: Journal of Heterocyclic Chemistry (1965), 2(3), 287-90
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The reaction of phenylacyl bromide and a variety of α-amino-heterocycles was investigated to determine its applicability to the preparation of fused imidazo-heterocyclic systems. The imidazo[1,2-a]pyrazine, imidazo[1,2-b] pyridazine, and imidazo[1,2-a]-benzimidazole systems and some variations of the imidazo[1,2-a]pyridine, imidazo[2,1-b] thiazole, imidazotriazine, imidazo[2,1-b]-1,3,4-thiadiazole systems are described.
IT **3649-20-5**, 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl-, hydrobromide
(preparation of)
RN 3649-20-5 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 9-methyl-2-phenyl-, monohydrobromide (9CI) (CA INDEX NAME)



● HBr

L4 ANSWER 154 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1965:439074 HCAPLUS
DOCUMENT NUMBER: 63:39074
ORIGINAL REFERENCE NO.: 63:6994d-f
TITLE: Synthesis of imidazo[1,2-a]benzimidazole and imidazolino-[1,2-a]benzimidazole derivatives
AUTHOR(S): Simonov, A. M.; Kochergin, P. M.
CORPORATE SOURCE: State Univ. Rostov-on-Don
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1965), (2), 316-17
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Reaction of 1-alkyl-2-aminobenzimidazoles with α-halo ketones and α-halo alcs. gave the corresponding 1,3-disubstituted 2-iminobenzimidazolines, which under the action of dehydrating agents or by heating with mineral or organic acids lost H2O and gave derivatives of [1,2-a]benzimidazole (I) or the corresponding 2,3-dihydro compds. Thus were obtained: 1-ethyl-3-phenacyl-2-iminobenzimidazoline, m. 120.5° (aqueous MeOH) [hydrobromide m. 2222.5° (decomposition, MeOH)]; 2-phenyl-9-ethylimidazo[1,2-a]benzimidazole, m. 93-3.5° (aqueous EtOH) [picrate m. 238-40° (decomposition, EtOH)]; 1-ethyl-3-(β-hydroxyethyl)-2-iminobenzimidazoline, m. 122.5-23° (C2H4Cl2) [hydrobromide m. 226.5-27° (decomposition, EtOH); picrate m. 182-3° (H2O)]; and 9-ethylimidazolino[1,2-a]benzimidazole [picrate m. 267-8° (decomposition, AcOH)].
IT 247-79-0, 9H-Imidazo[1,2-a]benzimidazole
(derivs.)
RN 247-79-0 HCAPLUS
CN 1H-Imidazo[1,2-a]benzimidazole (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 155 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1960:68172 HCAPLUS
DOCUMENT NUMBER: 54:68172
ORIGINAL REFERENCE NO.: 54:13100b-i,13101a-d
TITLE: Studies in the azole series. XI. Synthesis and reactions of the 2-chlorooxazoles
AUTHOR(S): Goeppner, Rudolf; Effenberger, Franz
CORPORATE SOURCE: Tech. Hochschule, Stuttgart, Germany
SOURCE: Chemische Berichte (1959), 92, 1928-34
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 54:68172
AB cf. preceding abstract 2-Oxazolones (I) with POCl3 give the corresponding 2-chlorooxazolines (II). The replacement of the Cl in the II proceeds readily with Na alcoholates, amines, and PhCHNaCN. The structure of the resulting 2-aminooxazoles is discussed on the basis of their ultraviolet absorption spectra. The appropriate I (1 mole) dissolved in the 5-fold amount of POCl3, the solution treated dropwise with shaking and cooling with 1 mole Et3N, heated to 120°, distilled in vacuo to remove the excess POCl3, the residue poured onto ice, neutralized with NaOH and NaHCO3, extracted with Et2O, and the extract worked up gave the II. 4,5-Diphenyl-2-oxazolone (III) (48 g.), 20.5 g. Et3N, and 165 cc. POCl3 gave during 10 hrs. 40.8 g. 2-chloro-4,5-diphenyloxazole (IV), b0.02 150°, pale yellow crystals, m. 44°. 4,5-Dipropyl-2-oxazolone (12 g.), 10 g. Et3N, and 75 cc. POCl3 yielded during 2 hrs. 5.9 g. 2-chloro-4,5-dipropyloxazole (V), b10 90-1°. 5-Ethyl-4-phenyl 2-oxazolone (10 g.), 6 g. Et3N, and 50 cc. POCl3 gave during 2 hrs. 7.8 g. 2-chloro-5-ethyl-4-phenyloxazole (VI), b0.2 93-4°. The appropriate II (0.01 mole) added to 0.04 mole Na in 100 cc. absolute EtOH, heated briefly to boiling, filtered, and the filtrate distilled or treated with H2O and recrystd. yielded the corresponding 2-alkoxyoxazole. IV (2.5 g.), 1 g. Na, and 100 cc. MeOH gave 2.35 g. 2-methoxy-4,5-diphenyloxazole, light yellow, m. 44°; V (2.1 g.), 1 g. Na, and 100 cc. MeOH gave 0.7 g. 2-methoxy-4,5-dipropyloxazole, b10 90°; VI (1.6 g.), 1 g. Na, and 100 cc. MeOH yielded 0.7 g. 2-methoxy-5-ethyl-4-phenyloxazole, m. 49°; IV 1.6 g.), 1 g. Na, and 150 cc. EtOH yielded 1.75 g. 2-ethoxy-4,5-diphenyloxazole, m. 64-5°. The appropriate II (0.01 mole) in 50 cc. xylene and 0.03 mole amine heated to 145-55°, cooled, filtered, evaporated, and the residue distilled or recrystd. gave the corresponding 2-aminooxazole. IV (9 g.), 12 g. PhNH2, and 100 cc. xylene yielded during 4 hrs. 8.5 g. 2-anilino-4,5-diphenyloxazole (VII), m. 155° (EtOH); picrate, gold-yellow prisms, m. 206-7° (EtOH); HCl salt, needles, m. 168°; Ac derivative, needles, m. 93-4° (EtOH). IV (4.3 g.), 4.5 g. MePhNH, and 100 cc. xylene heated 3 hrs. gave 4.75 g. 2-(N-methylanilino)-4,5-diphenyloxazole (VIII), leaflets, m. 118° (EtOH). VII (1.6 g.) in 200 cc. Me2CO and 25 cc. N NaOH treated during 2 hrs. at 50° with 2.5 g. Me2SO4 and 25 cc. N NaOH gave 1.4 g. VIII. IV (4.3 g.), 5.4 g. PhCH2NH2, and 100 cc. xylene refluxed 3 hrs., treated with CO2, and washed with H2O gave 2.3 g. 2-benzylamino-4,5-diphenyloxazole, needles, m. 134-6° (EtOH). IV (2.5 g.), 3 g. PhCH2NHMe, and 50 cc. xylene refluxed 4 hrs. yielded 1.6 g. 2-(N-methylbenzylamino)-4,5-diphenyloxazole, bluish fluorescing needles, m. 73° (80% EtOH). IV (2.5 g.) and 3.7 g. PHCH2NHPh heated 1.5

L4 ANSWER 155 OF 155 HCAPLUS COPYRIGHT 2005 ACS on STN (Continued)
hrs. at 150° gave 2.45 g. 2-(N-benzylanilino)-4,5-diphenyloxazole, needles, m. 105° (MeOH). V (1.9 g.), 3.1 g. MePhNH, and 50 cc. xylene refluxed 2 hrs. yielded 2.35 g. 2-(N-methylanilino)-4,5-dipropyloxazole, b0.15 113-15°. VI (2.1 g.), 3.0 g. PhCH2NHMe, and 30 cc. xylene refluxed 2 hrs. gave 1.7 g. 2-(N-methylbenzylamino)-5-ethyl-4-phenyloxazole, b0.09 144-6°. IV (5 g.) heated 6 hrs. with 200 cc. EtOH (satd. with NH3) in an autoclave at 150°, the mixt. extd. with Et2O, the residual sirup boiled with Ac2O, the excess Ac2O distd., and the residue dild. with EtOH and filtered off gave 2-acetamido-4,5-diphenyloxazole, pale yellow needles, m. 135-6° (EtOH). IV (2.5 g.) and 3 g. o-C6H4(NH2)2 heated 4 hrs. at 150° and the crude product boiled 3 times with 150 cc. H2O and recrystd. from EtOAc gave 2 g. 1,2-diphenylimidazo[1,2-a]benzimidazole, m. 297-8°. IV (2.55 g.) and 30 cc. HCONH2 heated 3 hrs. at 185° poured into H2O, and filtered gave 2.5 g. III, m. 211° (MeOH). PhCH2CN (2.6 g.) in 14 cc. abs. C6H6 treated with 1.2 g. NaNH2 and then dropwise during 0.5 hr. with 2.5 g. IV in C6H6, poured after 2 hrs. into H2O, extd. with C6H6, and the ext. worked up yielded 1.35 g. α-(4,5-diphenyl-2-oxazolyl)benzyl cyanide, m. 109°. IV (2.5 g.) in 25 cc. CH2Cl2 added dropwise rapidly to 2.1 g. [Et3O][BF4] in 25 cc. CH2Cl2, kept several hrs., evapd. in vacuo, and the oily residue kept 24 hrs. under Et2O yielded the cryst. 2-chloro-3-ethyl-4,5-diphenyloxazolium fluoroborate (VIIIa). Crude VIIIa (1.8 g.) in 20 cc. CH2Cl2 treated with 2 g. PhNH2 in 10 cc. CH2Cl2, stored several hrs., filtered, the filtrate evapd., and the residue treated with a little EtOH gave 1.4 g. fluoroborate (IX) of 2-phenylimino-3-ethyl-4,5-diphenyloxazoline (X), m. 236-8°. IX (0.6 g.) in 50 cc. dioxane refluxed 3 hrs. with 0.5 g. NEt3, evapd. in vacuo, and the residue treated with a little MeOH gave pale yellow leaflets, m. 97°. 3-Benzyl-4,5-diphenyloxazolone (10 g.) and 20 g. P2S5 in 600 cc. xylene heated 24 hrs. at 95-115°, filtered hot, distd., and the residue treated with MeOH gave 5.5 g. 3-benzyl-4,5-diphenyl-2-oxazolethione (XI), m. 122° (MeOH). XI (1.7 g.) and 0.5 g. PhNH2 heated 4 hrs. at 120-35°, cooled, and digested with a little MeOH gave 1.6 g. 2-phenytimino-3-benzyl-4,5-diphenyloxazoline, needles, m. 119° (EtOH). XI and Me2SO4 in PhNO2 heated, washed with Et2O, treated with 2 g. PhNH2, and filtered gave 2.9 g. product, m. 119° (EtOH).
IT 112376-72-4, 9H-Imidazo[1,2-a]benzimidazole, 2,3-diphenyl-
(preparation of)
RN 112376-72-4 HCAPLUS
CN 9H-Imidazo[1,2-a]benzimidazole, 2,3-diphenyl- (6CI) (CA INDEX NAME)